

# THE CALIFORNIA VETERINARIAN

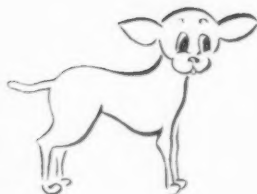
*Report of*  
**68th ANNUAL  
CONVENTION**

**Pages 15 - 27**



**JULY-AUGUST  
1956**

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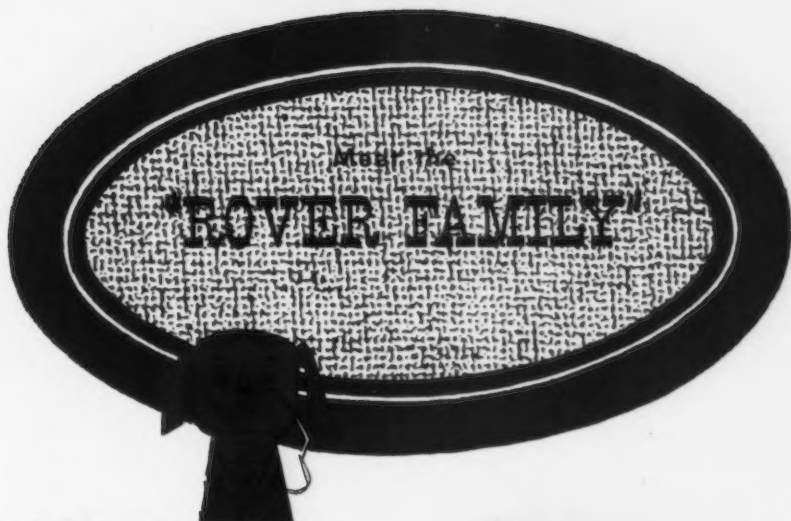
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THE CALIFORNIA VETERINARIAN





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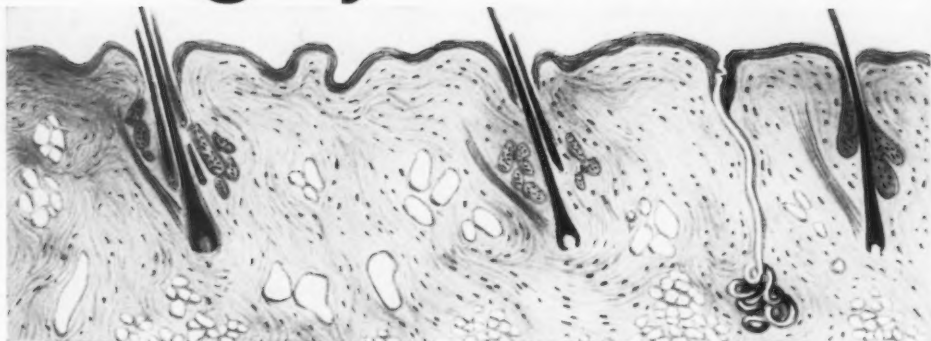
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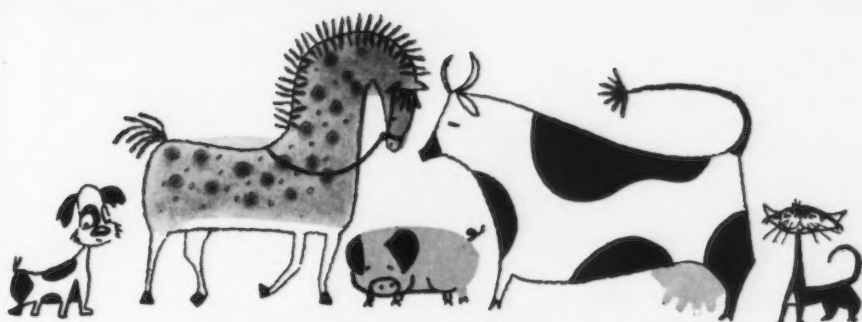
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1. Brodkey, M. A.: J. Omaha Mid-West Clin. Soc. 17:32, 1956. 2. Goodman, L., et al.: J. Invest. Dermat. 25:75, 1955. 3. Arnetsen, J.: Semana méd. 1:869, 1951.

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1. Rachman, M., and Frucht, T. R.: Vet. Med. 49:341, 1954.

2. Sternfels, M.: Vet. Med. 50:82, 1955.

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# THE CALIFORNIA VETERINARIAN

## JULY-AUGUST, 1956

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## *President's Message*



It is with a great feeling of humbleness that I accept the responsibility of the Presidency of the California State Veterinary Medical Association. Our association is unique in its position of accomplishments among other veterinary associations. We are fortunate and proud to have as our secretary the man we have, and to be the publishers of a fine publication, *THE CALIFORNIA VETERINARIAN*.

There is a lot of work to be delegated for the coming year. Further work is already underway on the revision of our Constitution and By-Laws. An active Legislative Committee is essential this year and such a committee has been appointed and it is one that is familiar with its duties. The Executive Committee is continually working on new plans and proposals to keep pushing ahead for the betterment of our association.

Recently new advances have been made in our group insurance coverage through our California State Veterinary Medical Association. Our Health and Accident policy has extended coverage to include the families of the members plus other increased benefits. Full details will be sent you regarding this new all expanded coverage, September 15. The new Group Life Insurance policy is now a part of our insurance program and offers coverage at a very low cost. Both of these policies should be studied and given serious consideration for inclusion in your present insurance program.

I hope that during the coming year, with the support of the membership, that I will be able to maintain the close harmony in our association and help to make advances for the betterment of our association and profession.

A. MACK SCOTT, D.V.M.

## Report of the Sixty-Eighth Annual Convention of the California State Veterinary Medical Association

The 68th Annual Meeting held at the Statler Hotel, Los Angeles, probably was the best meeting the Association has had in recent years. From all reports coming to our office the program was splendid, well arranged and the papers were excellent.

The exhibitors were adequately housed and space was far superior to that usually provided by our convention hotels in the past and the exhibitors seemed very happy with the reception from the doctors.

The meeting broke all records for registration, attendance at the President's dinner-dance and the number of exhibitors showing.

The Question and Answer Luncheon was sold out and was splendidly handled by Dr. Reginald Stocking.

The Exhibitors' Luncheon broke another record for attendance.

The hotel was large enough to hold everyone, had ample meeting space and was air-conditioned; furnished excellent service and good food.

The Women's luncheon and fashion show was most outstanding and the decorations were superb—thanks to the efficiency of the women in charge.

Everybody who came had a wonderful time and it does seem too bad that more did not attend.

This year we asked all speakers to provide informal abstracts of their talks, so that the report would be more accurate and useful, and we received abstracts from several. A number who did not send abstracts have promised to do so, or gave us their papers, some of which will be published in full, and some of which are briefed in this report. We are pleased with the results of this new system, and hope that in time all speakers will provide their own writeups.

### Monday Afternoon GENERAL SESSION

The program began at 1:30. After the invocation by J. Whitcomb Brougher, pastor of the First Baptist Church in Glendale, an official welcome was given by Wm. E. McCann, executive assistant to Mayor Poulson. President McCapes responded, after which Dr. Scott introduced the president of the AVMA. Dr. Cross was paying us the unusual compliment of a second visit during his term of AVMA service.

**AVMA News**—Dr. Cross has visited most of the colleges in the United States and Canada and is impressed with the progress of the profession. He is impressed with the caliber of the men being attracted to the profession and their confidence in the future. We need a group of

competent men to collect and study facts and statistics, to determine present trends and learn whether we are headed in the direction in which we would wish to go. Are we really interested in public health? Do we care about animal nutrition, or should we leave that to others? Should we allow others to take over the artificial insemination programs, the poultry practice; should teaching in our veterinary schools be done by men with a Ph.D. in a specialty, or with a DVM?

During his term as president-elect and president, Dr. Cross has been speaking almost constantly to veterinary groups, but, with the single exception of the Stockmen's Association of Nebraska, has not been asked to speak by any related business or professional group! This is shocking news. It demonstrates a lack of communication which prevents us from fulfilling our proper responsibilities. Other groups are not aware of the services we have to offer, and we are deprived of their assistance. We have been talking only to ourselves, and while this is necessary, it is not enough. We must not neglect this field of public relations.

The future of the Army and Air Force Veterinary Corps is a very serious matter. Many letters have been written in behalf of the Corps. The Military Affairs Committee has expressed disagreement with Secretary Wilson.

The California Association is the largest of its kind and has demonstrated both power and unity. Since it is so large, it is very important to hold fast to this unity, keep it statewide, regardless of varying interests and differences of opinion. Keep well organized; no local group should feel self-sufficient. Do not break into fragments, and do not let internal disagreements affect the unity of the state. Your State Association is well organized. Your executive secretary has done a constructive job. California Veterinary Medical Association leads the states in many things.

**Coccidioidomycosis**—Dr. Hoop gave a brief but general review of coccidioidomycosis (also known as San Joaquin Valley fever, valley fever, desert fever, or desert rheumatism) with especial reference to the San Joaquin Valley. There are also light infective areas in Santa Barbara, Paso Robles, and Ventura, Riverside and San Bernardino Counties. Outside of California, the disease is found in Arizona, New Mexico, and West Texas, and in Argentina, especially Buenos Aires. More about his review of this disease will be found elsewhere in this issue.

**Piperazine**—Piperazine is basically a six-atom ring with nitrogen at each end and two carbons at each side. The various piperazine compounds are made by attaching various



chemical groups to one of the nitrogens. Caricide was the first one to be used therapeutically, against parasites.

**Board of Pharmacy** — The talk by Floyd Heffron, executive secretary of the State Board of Pharmacy, was the best attended of the entire conference. The members were deeply gratified by his understanding of our problems and appreciation of our aims. The new cooperation of the veterinary profession with the Board and hence with other fields of medicine will lead to better protection of the public. The complete paper appears elsewhere in this issue. Please save it for reference; file it with your copy of the law it interprets.

**Business Meeting** — The business meeting was fairly attended, although matters of considerable importance were on the agenda.

Dr. R. C. Schock reported results of the rabies vaccination at the January meeting, and promised that each of the subjects would receive a report on his blood study within 90 days. He also announced a new publication on dog surgery, available from Lederle.

It was decided that the by-laws might well be returned to committee for further study, since the revisions so far are not entirely satisfactory. It was also decided to accept Santa Barbara's invitation and hold our next Annual Meeting under the sponsorship of the Santa Barbara and Ventura group. The association then went on record as approving the cooperation of veterinarians in rabies clinics only if sponsored by veterinary or public health groups.

Dr. Leo Henrich, Dr. Geo. H. Hart, Dr. Chester L. Nelson, Dr. Leo Conti, Dr. I. G. LaRue, and Dr. Raymond Duckworth were admitted to life membership in the association.

The new officers, installed by Dr. Reid, are: President, Dr. A. Mack Scott; first vice-president, Dr. Fred B. Walker, Jr.; second vice-president, Dr. Richard Stowe; third vice-president, Dr. Charles Ozanian; member of the Executive Committee, Dr. E. R. Braun; treasurer, Dr. Russell P. Cope. All were elected by unanimous ballot.

Our executive secretary, Charles S. Travers, gave his tenth annual report which was outstanding and showed a healthy financial condition which was backed by the treasurer's report by Dr. Russell P. Cope. It is remarkable what has been done and the progress the Association has made.

The meeting adjourned after tribute to deceased members.

## **Tuesday Morning**

### **LARGE ANIMAL SESSION**

**Noxious Weeds**—Dr. Quortrup gave an excellent report on the investigation of poisoning by certain weeds, including an outstanding piece of research on *Galleta* grass, in which no less than 14 different groups or individuals

cooperated. The work is being continued at Davis. The full paper will appear in a subsequent issue of *THE CALIFORNIA VETERINARIAN* and should be retained in the reference library of all general practitioners.

**Piperazine**—Dr. Stocking has promised to send us a writeup of his two papers on piperazine compounds, for future publication.

**Practice Tips**—Dr. Lank provided quotations from his paper on large animal practice, as follows:

*"Treatment of Anaplasmosis:* My usual treatment is either one gram of Terramycin or 2.5 grams of Aureomycin in 250 cc. of 5% Dextrose-saline solution intravenously. If the animal is quite anemic, I administer a minimum of 2000 cc. of citrated whole blood intravenously.

"My favorite method of collection of blood is with a 2000 cc. Abbott bottle with an Abbott dispensing cap and a suction bulb attached. A 12-gauge needle is attached with rubber tubing to the equipment. Before starting the blood collection from a healthy donor cow selected at random from the owner's herd, approximately 200 cc. of 2½% sodium citrate solution is pulled into the bottle by creating a vacuum by working the suction bulb. Then the needle is inserted in the jugular of the donor cow and the blood withdrawn. A few cc.'s of 2½% sodium citrate is pulled through the tube at the end of the collection to prevent the blood from clogging the equipment. The blood and citrate are mixed while the collection is being made by gently rotating the bottle. The transfusion is completed by attaching a Simplex Intravenous outfit to the bottle of citrated blood and letting it run through a 15-gauge needle into the jugular vein of the diseased animal. I find this procedure very practical and economical, as the equipment is cheap, easily cleaned and can be used over and over. Along with antibiotic therapy in all cases and blood transfusions, I always administer two Reeks capsules orally and leave four with the owner, two to be administered in 12 hours and two 24 hours later.

"Every effort is made to keep the animal as quiet as possible and provide plenty of water, shade, and something to tempt its appetite. Using this treatment, I have enjoyed good results in treating anaplasmosis under Louisiana conditions.

*"Diarrhea in Calves:* In addition to good sanitation and correcting feeding practices, 250 mg. Terramycin in 250 cc. 5% Dextrose-saline solution intravenously, is the treatment of choice. Next best is 400 mg. either of soluble Tetracycline or soluble Aureomycin in 3 oz. of Kaopectate by mouth."

A film was shown in which a commercial hog-catching gate, with a slight modification, was installed 14 inches above the floor on a ramp. The pigs came up the ramp, were caught in the gate and the veterinarian se-





**BETWEEN SESSIONS**—Dr. A. Mack Scott, newly-elected President, CSVMA, chats with Dr. A. M. McCapes, retiring prexy, and Dr. Floyd Cross, President, AVMA, in the spacious lobby of the Hotel Statler, headquarters for the 68th annual convention of the CSVMA.

cured the blood sample. This was shown as a step toward easier handling of swine for brucellosis testing.

**Film:** Also shown was a film illustrating the partial amputation of the penis of a bull with elastic ligatures. Following the pudendal nerve block, a number 12 Bardahl human retention catheter was inserted in the urethra. A tourniquet was applied around the penis and the urethra dissected away from the penis to a point posterior to the site of amputation. Two elastrator bands were applied around the penis anterior to where the urethra was dissected loose and the penis was severed anterior to the rubber bands. Bulls should be given 6-8 weeks' sexual rest before breeding.

**Bovine Indigestion**—Unfortunately, the report on bovine digestive upsets in the Los Angeles milkshed did not reach us in time for publication here. Look for it in a future issue.

#### SMALL ANIMAL SESSION

**Feline Infectious Anemia**—Dr. Cello was unable to attend the conference because of illness, and Dr. Hage read his paper.

**Prophylactic Puzzles**—Dr. Ott gave a very constructive talk on the inconsistencies in vac-

cination theory, practice, and results. Mechanisms of immunization are still baffling, and objective methods of determining immunity are still inadequate. An example of the bothersome problems he posed: if neutralizing antibodies do neutralize virus, then those induced by the first injection should neutralize the virus given in the second injection, and how could there be a booster effect? In fact, the neutralizing bodies should be used up or at least seriously decreased, and wouldn't the animal be susceptible again?

**Eye Tips**—Dr. Kingma discussed briefly the relevant physiology and structure of the eye, and the equipment and drugs usually used. By opposite effects on absorption of aqueous humour, atropine increases pressure while pilocarpine decreases it. Use alternate dilation and constriction in inflammation, to prevent adhesions and synechia. Corneal tissue has great regenerative power; give it a chance, even in apparently impossible cases, before resorting to enucleation. The fundus of the normal canine eye varies widely in appearance. Examine many normal eyes before diagnosing an abnormality with the ophthalmoscope. Weak sodium bicarbonate solution is sug-

gested to clean off purulent material; remember that the conjunctival sac is deep and the matter is irritating.

Procaine is unsatisfactory for eye anesthesia, and cocaine is damaging; both tetracaine and butyn are good. Ointment is better than aqueous, as it hinders drying of the cornea. Pseudomonas grows well in fluorescein solution; take care that your stock bottle does not become contaminated.

Sodium sulfacetamide and sulfasoxazoles are best for building up a sulfa concentration in the eye; they pass through more readily in inflammatory conditions. Hydrocortisone gives spectacular results in eye inflammations and is best used in combination with broad-range antibiotics such as erythromycin plus polymyxin.

Iodine vapor is best for cautery. Put crystals in a small test tube, then fiberglass, leaving 16 mm. free at the top; stopper with a glass cap for sterility. Anesthetize both eyes to minimize blinking, and hold the tube horizontal at the eye for 3 to 4 minutes. Instill drops of the dog's own blood and close with a bandage. Cut a flap in the bandage, secured with adhesive tape, for treatment. Stitches pull apart enough to irritate the cornea. Moist heat helps healing.

#### **Anesthetics, Analeptics, Anticonvulsants—**

Dr. Edds gave a clear and well-organized review, which he summarized as follows:

"Leonard (1947) suggested these considerations in study of general anesthetics: their safety; their ability to abolish pain; their property of allaying anxiety and excitement, of insuring complete control of the animal under surgery, and of reducing resistance so that no further obstacles are placed in the path of the veterinary surgeon. He stressed the great importance of giving the barbiturates slowly, with close watch of the pupillary reactions as well as the corneal and pedal reflexes.

"A new intravenous barbiturate, thialbarbitone (Kemithal), was developed in the laboratories of Imperial Chemical Industries, Limited, in England. Carrington, et al. (1946) reported on the pharmacology of this agent in comparison with pentothal or thiopental. Equiactive doses of the two drugs produced a similar duration of action and onset of anesthesia. Daily injection of thialbarbitone (Kemithal) in rabbits for 14 days did not produce any detectable histological changes. These investigators found thialbarbitone (Kemithal) causes about half the respiratory depression caused by thiopental sodium.

"Thialbarbitone sodium (Kemithal sodium) is a sodium salt of  $5-\Delta^2-[C_5H_5(C_6H_5)C.CO.NH.CS.NH.CO.Na]$ .

"A veterinarian from Thailand doing graduate work at Cornell University compared the activity of Benzefet to Amphetamine, Metrazol, and Coramine, and found Benzefet to be better in the following ways:

"(1) The onset of action is quicker with Benzefet than with the other agents used to stimulate respiration and circulation in dogs under anesthesia.

"(2) Whereas other cardiac respiratory stimulants act for only a brief period or produce overstimulation and convulsions which require further administration of a barbiturate—Benzefet causes just enough stimulation to raise blood pressure, aid in the prevention of shock, and hasten recovery after the anesthesia disappears.

"(3) When compared on a strict dosage basis, Benzefet is decidedly more powerful, more persistent, and produces more uniform stimulation than other agents.

"Mylepsin (primidone) is an entirely new anti-convulsant combining high activity with low toxicity. It is described chemically as 5-ethyl-5-phenyl-hexahydropyrimidine-4:6-dione.

"Research in control of epilepsy in man, conducted in Great Britain, resulted in the discovery of this drug in 1949. Since then, its value in treatment of human epileptics has been proved at various medical centers throughout the world.

"Results obtained from extensive trials in the field have shown Mylepsin (primidone) to be conspicuously successful in the relief of canine hysteria, true epilepsy, and other nervous disorders of the dog."

**Lobectomy** — Dr. Lumb advises lobectomy only when conservative treatment fails to show promise. Survival time so far is not high at present; in the future the operation will be more widely useful.

Indications are bronchiectasis, trauma, non-metastatic tumors, and for biopsy. Two men are required, as forced respiration must be maintained. As the apical and cardiac lobes on the left side of the dog are not well differentiated, both may be removed.

The patient is given no food for 24 hours; 30 minutes before operation, morphine and atropine are injected. Surital is used for induction of anesthesia, which is maintained by ether. Intravenous glucose is given, which facilitates injection of drugs if needed. He opens the fifth or sixth interspace and transects two or even three ribs if necessary. The pulmonary vessels are undermined and ligated separately with two ligatures, one of which transfixes the vessel for security. The bronchus is transected and ligated in steps, to prevent escape of anesthetic gas. The ribs are brought nearer together with three large stitches of No. 1 gut. Just before the incision is closed, air is expelled through a teat cannula while the lung is inflated.

#### **Tuesday Noon**

**Question and Answer**—The luncheon was very well attended and well managed. Dr. Reginald Stocking had arranged a panel at the

## Col. Robert J. Foster Honored



Chairman McCapes (right), presents a resolution of appreciation to Col. Robert J. Foster from the CSVMA. Dr. Floyd Cross, President, AVMA, was on hand to extend his congratulations and good wishes.

At the annual President's Banquet, Tuesday, June 12, 1956, Statler Hotel, Los Angeles, Chairman McCapes presented Col. Robert J. Foster, U.S.A. Ret., Past President, AVMA, (1936-37), and former Chief, Army Veterinary Corps (1934-38), with a resolution of appreciation for his military service and honoring his fiftieth year of active membership in the AVMA.

This is the second time that Col. Foster has been recognized by the CSVMA. At the Annual Meeting in 1953, Long Beach, he was

presented with a handsome twin pen and onyx desk set in appreciation of his efforts in promoting greater recognition of the veterinary profession.

This time the association recognized his untiring efforts on behalf of the Army Veterinary Corps. Col. Foster, personally, did more than anyone else to keep the Corps in high esteem during two World Wars, and since.

Col. Foster is now an *Honor Roll Member* of the AVMA, and a *Life Member* of the CSVMA.

head table, and organized the questions so that no time was wasted, and in fact the quiz moved along too fast for adequate taking of notes.

Dr. Lumb: The best way to treat slipped patella is to remove it. The trouble is usually caused not by stretched ligaments, but by a flattened condition of the trochlear ridge.

There is no simple technic for passing a catheter in a female dog, although some people become very expert. A lighted Brinkerhoff speculum may be of use in large females, and an anoscope may help.

Dr. Lank: Cattle on the Gulf Coast on hot days may have temperatures ranging from 103

to 105, and not be sick. The temperature goes down to normal when they cool off.

Nobody at the meeting had any remarks to make about ultrasonic therapy.

Dr. Righetti: The effectiveness of rumenotomy for removal of toxic substances depends on the amount of toxicity. Not enough toxin can be removed if it is also in the blood, etc.

Dr. Edds: Just as in human medicine, Mylepsin does not cure epilepsy, but only controls seizures. It can be useful in early distemper, but not always; reports vary. Amphetamine and desoxyephedrine act for longer periods than metrazol.

Dr. Stocking: Piperazines can be used safely during late pregnancy, as far as is known, but he would hesitate to name a dose. It is safe during lactation, as it does not pass into the milk. The dose of the adipate would be 220 mg./kg. and of the carbondisulfide complex 150 mg./kg. The latter should be given in the morning before feeding; in hogs it takes three times as much when the stomach is full as when they have not been fed overnight.

Dr. Ott: The dose of vaccine for a Chihuahua is the same as for a Great Dane, as in either case there is virus which will grow regardless of the size of the host. Some cut the dose in half for small dogs, but he doesn't advise it. Asked why Fromm makes three vaccines if one would do the job, he replied that they make four, and because veterinarians ask for it. City dogs are exposed to distemper at lampposts, etc., and at three months of age may have higher titers than vaccinated country dogs. However, a confined pet remains susceptible and may come down if exposed at any age.

Dr. Kingma: A dog coming out of barbiturate anesthesia can be put back to sleep by glucose injection intravenously, because the excess glucose calls forth increased epinephrine, which facilitates passage of the barbiturate back into the nerves. It is not dangerous, because only the barbiturate in the blood which has not already been broken down is being used.

Dr. Quortrup: The pulp of death camas is most toxic but animals do not dig down to get it; other parts are also toxic. Cattle are not necessarily poisoned when a field is full of it; it depends on how much they eat. They have to get about 2 lb. per 100 lb. of body weight to be affected. The sublethal dose of Galleta grass has not been determined. They are sure it causes not just impaction, but also cytoplasmic changes in the liver.

Dr. Harris: Continued use of progesterone has not caused sterility; racing dogs and horses have been treated for as long as six months, and conceived normally when the hormone was discontinued.

Mare's urine is not satisfactory for pregnancy testing. In the human female, gonadotropins are high in urine and low in blood, while in the mare the reverse is true. Mare serum should be drawn between the 45th and 90th days for the rabbit test, up to 120 days for the mouse test.

Stilbestrol feeds for cattle have caused no demonstrable appreciable side effects so far, but the ultimate effects on breeding are unknown.

Dr. Righetti: Acetonemia in some dairies is a constant problem in spite of changes in animals and management; it seems to occur in a belt along the river, and may have some connection with the water.

Dr. Stocking: Pinworms in man and animals are various species, each apparently staying with its own host.

Dr. Hage: Aureomycin is the antibiotic of choice in feline infectious anemia, 25 mg./lb. for 4 days, 10 mg./lb. for another 10 days. He also recommends 20 cc. of blood in 5% dextrose solution intravenously.

Dr. Stocking: Blood dyscrasias might follow phenothiazine treatment in hogs, as in horses.

Dr. Lumb: No research has been done on the best age for spaying; spaying before heat seems to be for convenience.

Dr. Adler told how he uses a dental forceps (Clev-Dent No. 16) for removal of teeth; he gets one prong between the roots and pops it out.

A demonstration of bandaging with equipment from Scholl Mfg. Co., Inc., fascinated the audience. Tube bandages are applied with incredible rapidity and neatness from cylindrical frames, to head, feet, legs, tail, abdomen, with any desired degree of pressure.

## Tuesday Afternoon

### SMALL ANIMAL SESSION

Mr. Hoff summarized his talk on the new hemostatic agent, Klot, as follows:

"Bleeding time, clotting time, prothrombin time, toxicity and mode of action of Klot were studied so as to establish measurable hemostatic values to supplement the published clinical data.

"A new method for measuring bleeding time in the lip of canines, by standardized procedures, proved statistically valid. Control times ranging from 3 to 11 minutes were reduced to 45 seconds to 4½ minutes. Average values reduced from 5¼ to 2¼ minutes. Dose IV was 1 cc./10 lb.

"Seven dogs showed accelerated prothrombin time after IV dose of 1 cc./10 lb. Values averaged 64% within 10 minutes, 63% after 24 hours and 101% after 48 hours. Doses of 5 and 10 cc./10 lb. produced readings of 78% and 62%, respectively. An unique safety factor is thus indicated.

"Clotting time in same dogs was reduced from average of 103 seconds to 65 seconds.

"A third valuable hemostatic mechanism was indicated by a small but sustained blood pressure rise following the IV administration of Klot. A vasoconstriction effect is suggested.

"A graduated, increased blood pressure effect is produced by multiple dosage; the increase is constant and well sustained. In animals whose vasoconstrictor mechanism has been damaged by whole body sub-lethal X-ray irradiation, hemostatic effect is not observed.

"Acute toxicity by the standard LD procedure in mice showed 50% killed by respiratory paralysis with 172 Calculated Therapeutic Doses; 100% were killed by 256 C.T.D.

"Chronic toxicity studies in all common species involved daily administration of 5 or 10 C.T.D. for four to six weeks. Hematologic, pathologic or visible toxicity was not elicited in a wide range of healthy, ill and injured animals of all ages."

**Fluid Therapy**—Dr. Kingma's information will be included in a brochure to be published by Abbott late in July. He emphasized the nutritional needs of the patient and the reasons for slow injection. For a 22-lb. dog, he suggests 1300 cc. of 15% dextrose and 375 cc. of 5% amino acid (protein hydrolysate) given over a period of 12 hours. He showed a method of continuous injection of dogs which does not require constant supervision.

**Ear Panel**—Dr. McBride had organized his panel expertly, so that this feature went off without a hitch and with no lost time. Basic points were brought out as follows:

Dr. Stiern: Parasites and foreign bodies (mites, ticks, foxtails and barley awns) are the commonest causes of canine ear disease. The rest of the panel concurred.

Dr. Steinmetz: Predisposing causes are long, floppy ears, hairy ears as in poodles, and long narrow canals such as in setters. In rural dogs, the environment is predisposing.

Dr. Beck: Restraint is of primary concern in examinations. He muzzles with clean gauze, for the psychological as well as the physical effect. If necessary he uses Surital or pentonal. He ties a dog down only when it cannot otherwise be restrained, and the owner refuses to allow anesthesia. Dr. Marcus reported from the floor that he likes Methadon, 1.5 cc. for a 25 to 30 lb. dog. It causes vomiting and defecation but is not as bad as morphine. Intravenous injection is almost instantaneous and intramuscular injection takes 5 to 10 minutes. It is excreted in 4 to 6 hours. Dr. Crow said, also from the floor, that the owner must be warned to expect defecation, which may occur in the car on the way home. It seemed to be the consensus that the defecation was usual and too much of a disadvantage, distracting the doctor or annoying the owner.

Dr. Stiern: No local anesthetic is satisfactory for ear work. Surital is best as a general anesthetic. It causes salivation, but that is less messy than defecation.

Dr. Steinmetz routinely clips the area around the ear canal; cleans with isopropyl alcohol on a cotton swab, not penetrating too deeply to avoid pushing debris down into the canal. He tapes the treated ear over the head for air circulation. Dr. Smith likes pHisohex for cleaning.

Dr. Smith: Treatment for otitis media is not always successful. He may send a swab to the laboratory to determine the sensitivity of the causative organism to antibiotics.

Dr. Beck: Broad-spectrum antibiotics have been successful in chronic suppuration, especially terramycin in combination with corti-

sone. Instilysin and Metacortin are also good.

Dr. Smith: Lateral resection is a last resort when no conservative methods give results, or when there is much granulation tissue. Healing takes about two weeks.

Slides were shown of various ear conditions, and the panel gave their suggestions on how best to deal with them.

Dr. Easterbrooks describes Varizyme and its uses as follows:

"Varizyme enzyme complex contains streptokinase, streptodornase, and human plasminogen (SK-SD-HP). In human plasma, streptokinase reacts with the enzyme precursor, plasminogen, resulting in the formation of the active proteolytic (fibrinolytic) enzyme, plasmin. The mixture of SK-SD and HP is, therefore, capable of lysing clotted blood, caseous and fibrinous exudates. Edema and cellulitis fluids found in inflammatory processes contain a large amount of fibrin. This is probably part of nature's defense to wall off the inflammatory stimulus—the so-called "limiting membrane." In some cases, while containing the irritant, nature's process also prevents humoral agents or chemotherapeutic agents from neutralizing the irritant. Varizyme has a lysing effect upon such membranes resulting in the reversal of inflammation, and permitting antibiotics that are administered simultaneously to control associated infection. It has not been possible to demonstrate by *in-vitro* methods that SK stimulates the reaction of plasminogen to plasmin in bovine plasma. Only a percentage of canine plasminogens are activated. When human plasminogen is added to SK, human plasmin is formed. A second substance, SKX (still not characterized), is also formed. SKX is capable of stimulating the reaction of bovine or other plasminogens to plasmin. In the absence of a clinically practical test to determine if the plasminogen of a specific patient is activated, the addition of HP to SK theoretically assures the reaction in all cases treated. Canine, equine, and bovine cases which have been reported as amenable to Varizyme plus antibiotic therapy include: abscesses, actinomycosis, arthritis, bronchitis, bursitis, cellulitis, edema, hematoma, mastitis, myositis, non-healing wounds and ulcers, osteitis, periostitis, and pododermatitis. Varizyme is an experimental therapeutic agent and is not commercially available at this time."

**Zoo Animals** — A brief summary of Dr. Schroeder's paper follows:

"The San Diego Zoological Society was incorporated in December, 1916. The Society manages the San Diego Zoological Gardens and employs a staff of 240. The zoo is one of the largest in the world, having approximately 3300 specimens representing more than 850 species on a 200-acre tract of land in Balboa Park. The zoo is unique in being an outdoor institution and not requiring formal heated





68TH ANNUAL CONVENTION  
California State Veterinary Medical Association  
STATLER HOTEL, LOS ANGELES JUNE 12, 1968

The 68th Annual President's Banquet and Dance, June 12, was the largest ever held by the CSVMA. The well-decorated tables, with centerpieces of pink satin bird cages, were the handiwork of the Women's Local Committee. Hal Sandack's Orchestra provided the dance music. We are sorry that the camera did not pick up the entire crowd, which filled tables to the left and right.

buildings. The Society maintains a two-floor animal hospital and laboratory and spacious outdoor hospital and quarantine area, managed by the veterinarian, Werner P. Heuschle, California, '56.

"The scientific activities are governed by a Research Council of 20, including seven professors of the University of California. A grant-in-aid to a research fellow is made each year through the Ellen Browning Scripps Foundation. This year's recipient is Professor Clyde Stormont, Ph.D., University of California. His special interest is in comparative serology of the herbivores and their genetic relationships. The Council also governs the activities of a Research Associate, presently Joan Morton Kelly, Ph.D. (psychology), interested in animal behavior.

"The health of the animals in the zoo is the immediate problem of the veterinarian. His activities, for the most part, are devoted to the prevention of disease and extending the reproductive life of the unique animal collection—the maintenance of adequate nutrition for all species, the avoidance of infectious, nutritional and parasitic diseases, the correction of these disturbances when they appear, the insistence on adequate housing of a kind which will increase longevity are his responsibilities.

"*Ipsa facto*, all zoo exhibits end up on the post-mortem table. The Museum of Vertebrate Zoology, University of California, Berkeley, carries an inventory of our zoo exhibits and by priority receives all those specimens needed to complete their collection, to be used for study purposes. Soft parts, skeletal material, parasites, blood smears, whole blood and serum, eyes and special organs are distributed worldwide.

"The tetracycline broad spectrum antibiotics are playing a major role in prolonging the life of captive wild animals, that is, specific chemotherapy. Increasing non-specific resistance to disease will play a major role in maintaining exotic animals in captivity. Many species of animals exhibited in the zoo will eventually be found to be ideally suited to laboratory use as experimental animals in the fields of nutrition, parasitic and infectious diseases both of man and animals.

"Whereas most funds and the greatest number of competent scientists have devoted the greatest amount of time leading toward better health for a single species, *homo sapiens*, we find that we know comparatively little about the 2000 species representing the three zoological classes, Aves, Reptilia and Mammalia, exhibited in the zoo. The zoo veterinarian has the unique job of assembling and reporting his observations which may very well lead to major discoveries in human and domestic animal medicine."

## LARGE ANIMAL SESSION

**Anaplasmosis**—Dr. Carricaburu covered the subject very thoroughly and gave his own clinical experience in management of the disease, with especial reference to the value of terramycin. Since he has made his carefully prepared paper available to us, we will endeavor to publish it in full in the near future. In the meantime, these facts are especially interesting: Of a series of 63 cases treated with terramycin, there were only 4 deaths, while among 34 clinical cases treated without terramycin there were 26 deaths. Regardless of other factors involved, terramycin appears to be most valuable. The effective dose was about 3 mg./lb., and no blood transfusions or other treatment were used.

**Race Horses**—Dr. Roberts gave an outstanding talk on practical therapeutics in race track practice, but he wished to go over it again before submitting it for publication. Look for this one in a fall issue.

**Range Practice**—Dr. Kennedy gave an excellent presentation of the specialized aspects of range practice. Because of the distances involved and the poor roads, much time is consumed in travel. Help and facilities for handling animals are not necessarily good. One trip may be all that can be made, and advice on follow-up treatment will differ decidedly from what is given in a more closely knit practice. Further, injury or disease is usually past the first stage before the veterinarian is called.

In horses he finds azoturia, botulinus poisoning, sweeny and sore necks during and after the hay season, all sorts of wire cuts, and saddle sores.

Dr. Kennedy claims the only large practice area without a single dairy herd. Among his beef cattle, anaplasmosis is common and usually chronic. It is usually transmitted by dehorning and castration. For a spray to discourage ticks, deer flies and horseflies, he likes a lindane-toxaphene combination. Bacillary hemoglobinuria occurs at almost predictable times and places, and is controlled by vaccination since sick animals are rarely seen soon enough for treatment. Leptospirosis was diagnosed and confirmed for the first time in Nevada last year; there were two outbreaks 70 miles apart. Pneumonia is most common in weaner calves. If calves are approached slowly they get up; the normal ones stretch themselves then, and the ill ones do not. This is not diagnostic, but is useful. Those with a temperature of 106 to 108 are just coming down and are easiest to treat. They get sulfathiazole and sulfapyridine intraperitoneally, and one injection is usually enough. It is not given by mouth as it disturbs them more. Those with fevers of 104 to 106 get 1.5 ml. penicillin and sometimes sulfa by mouth. Those with normal



temperatures are separated from the rest, and may be given hemorrhagic septicemia serum.

## **Tuesday Night**

### **BANQUET**

The banquet was a success with thanks due our executive secretary's untiring efforts to see that all were seated, which was a difficult task because of the late arrival of a number of people who had not purchased their tickets in advance and requiring that more tables be set up to take care of them. Hal Sandack's orchestra provided excellent dance music.

After dinner, Dr. A. M. McCapes introduced those seated at the head table and presented Dr. Floyd Cross, President of the AVMA, with a silver tray engraved as follows:

*"To Dr. Floyd Cross, as a tribute to a fine man and an excellent President of the American Veterinary Medical Association. Presented by the California State Veterinary Medical Association, June, 1956."*

The response by Dr. Cross was heart-warming.

This presentation was followed by Dr. McCapes reading the Association's commendation in behalf of Colonel Robert J. Foster for his almost single-handed revamping of the Veterinary Corps between the Wars.

The annual banquet gives the ladies a chance to look their best which they always do and the tables were startlingly beautiful, with centerpieces of pink satin bird cages, thanks to the wonderful work of the women's local committee who are to be highly congratulated.

## **Wednesday Morning**

### **GENERAL SESSION**

**Investments**—Mr. Karr, who has been in the investment business since 1913, gave an excellent talk on investments for veterinarians.

### **LARGE ANIMAL SESSION**

Fortunately, we were given abstracts of all papers in this session, and we present them as received.

#### **The Whey Test for Bovine Brucellosis**

H. S. CAMERON, D.V.M., Ph.D.

*School of Veterinary Medicine, Davis, California*

Conclusive evidence was presented showing that the whey plate agglutination test using ring test antigen was more efficient in diagnosing bovine brucellosis than the blood test.

The whey test is used on the individual animal while the ring test is conducted on a composite herd sample. For the whey test a composite milk sample from all four quarters is obtained. A total amount of not more than 10 cc. is sufficient. To this is added two drops of rennet and the sample is incubated for an hour at 37°C. or until the milk has coagulated

and the whey is separated out. The test is then conducted in a manner similar to the blood-serum plate test, except that ring test antigen is used.

Simultaneous blood and whey tests have been conducted on over 7,000 cows. In 96 per cent of the tests there has been complete agreement. Where there was disagreement, however, the whey test, on the basis of bacteriological examination of milk, was more efficient in detecting infection. One distinct advantage of the test is in the fact that a whey titer will not persist following vaccination. An animal reacting to the whey test is infected unless it was recently adult vaccinated. A vaccination whey titer will become negative in from two to three months.

The application of the whey test will have a marked stimulating effect on the brucellosis eradication program in California. Frequent blood testing, which is necessary in an efficient program, is impractical under California conditions. The whey test, on the other hand, is feasible and can be repeated as often as seems desirable. Such a procedure would greatly reduce the amount of blood testing. At the most, it would only be necessary to blood test the dry cows. Conceivably, repeated whey tests over a period of six months should include all cows in the herd. The test can be used jointly with the herd ring test. If the latter is positive or suspicious the individuals animals can then be whey tested.

### **Correcting Breeding Disorders**

ROBERT B. LANK, D.V.M., B.S.

*Louisiana State University, Baton Rouge, La.*

A veterinarian must have up-to-date records on each cow—these include heat dates (whether bred or not); breeding dates, including bulls used and whether artificial or natural; calving dates, whether calving normal or abnormal, whether calf living or dead; retained placentas, abortions, abnormal vaginal discharges and generalized disease conditions which the animal has experienced.

Generally speaking there are six causes of breeding disorders: namely, management, infections, congenital abnormalities, endocrine imbalances, nutritional and miscellaneous causes. Of these, management is one of the biggest causes of breeding difficulties. The owner must be informed that 50-60 days must elapse between calving and breeding. If artificial insemination is employed then it must take place toward the end of the estrous period, that certain bulls are low in fertility and if an owner is carrying on a program of breeding in which only one bull of low fertility is used, then using this bull will result in a lowered over-all breeding efficiency. That proper handling of animals at time of heat is

necessary—keeping the animals quiet and not exciting them, also proper handling at calving time is essential to good breeding efficiency. Adequate complete records are a must, and only the owner or herdsman can compile them.

I do not believe hormones should replace all manual enucleations. A system as delicately controlled as the reproductive system can very easily be completely thrown out of balance by endocrine therapy—likewise irreparable damage can be done by rough handling. Each has its place and you, as a veterinarian, must decide which would be the best suited to obtain the desired results. My only caution—use moderation in every decision, whether in the application of pressure to an ovary or in administering hormones.

Metritis, endometritis and cervicitis are treated with either 20 cc. Di Instillin S infused in the uterus and a little in the cervix or 500,000 units penicillin, 1 gram streptomycin in 20 cc. physiological saline solution infused in the uterus. I recommend on fourth service if no abnormality is detected by rectal examination and the cycles are normal, to breed the cow and in 24 hours infuse into the uterus 20 cc. physiological saline solution with 1 gram streptomycin and 500,000 units penicillin. Although some research workers have shown that no value is received from this treatment over non-treated controls, I find more and more requests for this treatment are being made.

A series of slides of the reproductive tract were shown and corrective measures for each condition were explained.

#### **Mastitis: Its Diagnosis, Control and Prevention**

GEORGE T. EDDS, D.V.M., Ph.D.

*Fort Dodge Laboratories, Inc.*

The immediate problem of the attending veterinarian is to properly diagnose, treat, and return the dairy cow to normalcy and full milk production. Both acute local mastitis with limitation of infection in the udder, and acute systemic mastitis, accompanied by systemic symptomatology resulting from toxemia and bacteremia, are of vital importance.

A number of methods for detection of mastitis have been proposed, such as the strip cup, pH determination, leukocyte count, catalase test, Hotis test, bacteriological diagnosis, and more recently a modification of the latter by use of containers with selective media for detection of streptococcal and staphylococcal infections.

In the development of new drugs, veterinarians, livestock owners, and manufacturers are concerned that the drugs be proved safe, non-toxic, show no irritation or cause other tissue damage, and in addition, be proved effective both in the laboratory and in clinical practice.

Certain of the more resistant strains of staphylococci, isolated from clinical cases of

mastitis, have been shown to be more susceptible *in vitro* to a combination of penicillin and streptomycin, as well as a combination of these antibiotics and the sulfonamide, sulfoxazole, than to the single drugs.

The data to be presented demonstrate the two- to ten-fold increase in bacteriostatic activity when cobalt was added to this antibiotic combination.

Because of improved antibiotic activity, the new formula and the other necessary data were submitted to the Antibiotic Division of the Food and Drug Administration for approval. It is felt that the new combination of antibiotics with cobalt will provide the means for better service to the dairy cattle owner in treating mastitis.

A new and distinctively different disinfectant was recently introduced into this country. This material, chlorhexidine, called Nolvasan, is chemically bis-p-chlorophenyldiguanidohexane. It provides the most powerful anti-mastitis disinfectant known. The chemical destroys, swiftly and efficiently, all the organisms known to cause mastitis. Wilson, 1955, reported on comparative studies where this material was used to disinfect hands, teats, and teat-cups before the milking of each cow. Nolvasan's activity was compared to that of the hypochlorites and quaternaries, which, up to now, were the two most commonly used disinfectants.

The comparative properties of the three agents may be briefly summarized:

**Hypochlorites:** 1. Easily inactivated by organic matter, such as milk and dirt, which is always encountered during milking. 2. Often cause chapping of the teat or milker's hands.

**Quaternaries:** 1. Effective against gram-positive organisms, but have little action on gram-negative bacteria. 2. Remove natural oils of the skin and teats, resulting in chapping both to the cow and milker.

**Nolvasan:** 1. Not inactivated by organic matter. 2. Does not cause sores or chapping. 3. Effective against both gram-positive and gram-negative organisms.

#### **Vibriosis in Cattle**

H. L. EASTERBROOKS, D.V.M.

*Research Division, American Cyanamid Company,  
Pearl River, N. Y.*

Accurate diagnosis and sound management are essential in the control of vibriosis, a cause of abortion, off-cycle returns to estrus, and repeat breeding in cattle. Since cultural tests are often difficult to obtain, serologic tests are the primary tools available to confirm a clinical diagnosis. The advantages of the so-called "tampon" as compared with the blood test are that it detects cases not detected by blood test; and, since mucous titers persist longer if only one test is used, more reactors are detected. Its disadvantages are that not all infected animals react to test; it is more expensive and

time consuming; reactions may persist longer after clinical recovery; tests taken during estrus are nearly always negative; and a small percentage of samples are too viscid to test. On a practical basis, diagnosis in bulls is limited to cultural techniques. Treatment and management include: 1. artificial insemination with streptomycin-treated, diluted semen; 2. treatment of problem females by direct infusion of antibodies into the uterus; 3. combined systemic and local treatment of infected bulls with antibiotics; and 4. the practice of sound herd management.

#### SMALL ANIMAL SESSION

**Adrenal Steroids**—Dr. Stocking made available a dosage chart (prepared by Dr. Haas of Upjohn) covering the various steroids, as there is wide variation among the various preparations. About 30 steroids have been isolated from the adrenal, but only cortisone acetate and hydrocortisone have been found useful in treatment of arthritis and other diseases of connective tissue origin, and allergy. Hydrocortisone and its derivatives are more effective than cortisone. They are useful in mastitis, while cortisone has very little or no topical activity. The federal Food and Drug Administration has now approved a preparation containing hydrocortisone and antibiotics. Fluorohydrocortisone is available for topical use, but cannot be used systemically at present because it causes sodium retention. Other compounds will become available in the future.

These preparations do not cure any disease but relieve the symptoms, as insulin relieves the symptoms of diabetes. However, allergic symptoms may not recur after medication is stopped, if the cause has been removed, and arthritic symptoms may not recur after a course of treatment, because the body functions have taken care of the condition.

These preparations will maintain life when the adrenal gland has been removed; they are anti-inflammatory, antipyretic, antiallergic, and antitoxic; they maintain blood pressure and retain sodium; they affect glycogen deposition in the liver; and they produce euphoria by a general neuromusculotonic effect. Hydrocortisone is usually given in four divided doses daily. The starting dose is given until there is remission of symptoms, then the dose is dropped to a maintenance level and given once daily to once weekly. If dosage has been high, it should be withdrawn in steps to prevent shock. It is not used in suppurative infections except in combination with antibiotics. Local anesthesia should be used before intra-articular injection. Different compounds are given by different routes, and dosage varies.

**Ringworm**—The last time we had a woman on the program was when Dr. Agnes Fay Morgan of the Berkeley campus spoke at Davis before the war. Correct me if I'm wrong. This time we had Carlyn Halde, a mycologist from U.C.L.A., and she summarized her paper as follows:

#### Laboratory Diagnosis of Ringworm

CARLYN HALDE, Ph.D.

Mycologist, Division of Dermatology  
UCLA Medical Center

The misdiagnosis of "ringworm infection" for various dermatologic conditions in both veterinary and human medicine has accounted for expensive, prolonged and unrewarding treatment. At the same time, unsuspected and untreated cases of fungus disease have spread infection to innumerable individuals, both animal and human.

Those fungi responsible for most fungus infections in animals are *Microsporum canis*, *Trichophyton mentagrophytes*, and *T. verrucosum*. Most domestic pets, such as the dog and cat, have infections due to *M. canis*. *Trichophyton mentagrophytes* infection is usually seen in rodents, such as rabbits, white mice, hamsters, etc., but can also occur on nearly any animal. *T. verrucosum* infection is seen primarily on cattle and horses. Very rarely are any other fungi responsible for ringworm in animals in the United States.

Clinical diagnosis in animals is, at times, difficult but the use of a Wood's light readily aids the veterinarian in establishing infection due to *M. canis*. This device is of no use in establishing the diagnosis of ringworm caused by other species of fungi. The clinical diagnosis can be confirmed only by microscopical or cultural means. Recent culture methods incorporating antibiotics have greatly aided the laboratory diagnosis through the isolation of the etiologic agent. This is a relatively simple procedure which can aid veterinarians greatly in their work.

**Embalming**—Dr. Gale, also borrowed from U.C.L.A., made embalming not only practical, but fascinating. His slides of gross and microscopic views of embalmed organs showed how useful this method may be. He describes it thus:

A method of embalming small and large animals has been developed which permits both gross and histological examination of the tissues at long intervals after completion of the embalming procedure.

The solution used has the following composition:

Formaldehyde .....	3%	} 40G
Phenol (liquid) .....	2%	
Alcohol (95%) .....	20%	
Glycerine .....	21%	
Sodium chloride .....	2.7 grams	
Warm water .....	54%	

The remains of man, dog, cat, monkey, porpoise, shark, giant turtle, octopus and a forty-ton whale have been preserved with formula 40G. For gross study, the time lapse between death and embalming can be as much as 24 hours, and up to 14 days if refrigeration is used; however, for histological study embalming must begin within 6 hours. The time lapse between embalming and the histological examination can be as much as 14 months, but for gross study, three years can elapse.

**Gas Machine**—Dr. Lumb was not particularly impressed with the gas machine until he had used it. Now he says it is the Cadillac of anesthesia, and the more he uses it the more he likes it. The thousand-dollar model his film demonstrated gives all the volatile anesthetics and also gases such as cyclopropane or nitrous oxide, and concurrent oxygen. Its operation is apparently simple, yet very precise. An anesthetist is required. It is indicated for all poor risk patients. There is more safety for the patient and less danger of explosion from ether since it a closed system. Ether is explosive in mixtures of 1 to 36% in air, 2 to 82% in oxygen. The machine permits open chest work, and has been used on dogs, cats, monkeys, pigs, sheep, and cattle up to 600-800 lbs.

A smaller machine was also shown, made by the Physiology Department at Colorado A & M. The parts cost about \$50, and it is satisfactory for the volatile liquids but does not handle gases.

**Skin Autograft**—Dr. Vierheller described a very interesting use of skin for internal repairs. He mentioned sealing intestinal anastomosis, but gave a full account of the use in reconstructing the lateral ligament of the elbow joint in the dog. A case history is presented elsewhere in this issue.

## Exhibitors' Luncheon

President A. Mack Scott and Charles S. Travers, executive secretary, hosted the largest Exhibitors' Luncheon ever held by the CSVMA on Wednesday, June 13, at the Statler Hotel, Los Angeles.

Total attendance was 55 and included most of the exhibitors at the annual meeting.

Greetings from President Scott were followed by introductions from Secretary Travers of Dr. George L. Ott, Fromm Laboratories; Dr. George T. Edds, Fort Dodge Laboratories, and Mr. Donald A. Hoff, Warren-Teed Products Co. In addition to being exhibitors at the convention these gentlemen were also featured speakers on the program.

Secretary Travers elicited suggestions, comments and criticisms on the 68th annual meeting from the exhibitors' point of view. Almost unanimously those in attendance expressed satisfaction with facilities and arrangements.

The group was extended an invitation to exhibit again in 1957 at Santa Barbara.

Attending were: H. W. Sands, Sands Plaques; J. W. Orchard, P. R. Beilmann, Lederle Laboratories; Elmer K. Deibert, Tom Scott, Armour Laboratories; Victor Heirendt, J. B. Lippincott Co.; H. J. Gilbride, Don Nichols, California Medical Supply; Ray Vejar, Gabe Sharpe, Sharpe & Co.; George L. Ott, Bill Nowlin, Fromm Laboratories; James L. Mickelson, P. L. Mustard, Sharpe & Dohme.

Bill McCusker, Miles Laboratories; D. T. Wilson, Winthrop Laboratories; Dr. William Swangard, Lionhaven, Ltd.; Shiral Meisenheimer, Dean DeGroff, Pitman-Moore; William C. Mudd, George McConnell, John Leamy, H. C. Burns Co.; Leo Lindauer, Central City Chemical; Verne H. Jewett, Roy White, Joe N. Tolle, George T. Edds, Roscoe V. Hill, Fort Dodge Laboratories; Donald A. Hoff, Robert Kilcrease, Howard Hermesen, William Orr, Warren-Teed Products Co.

Arnold Lowman, Westwood Laboratories; C. W. Saleme, Western Livestock Journal; James K. Banes, Banes Laboratories; Louie Stockbauer, Jen-Sai Co.; Jack Kostick, Larry Tretter, Standard Surgical Company; Kenneth Martin, Bob DePugh, Hill Packing Co.; William Montfort, U. S. Vitamin Corp.; Del Murray, Eirl Mundt, Schering Corp.; Martin Fiderer, Doug Haig, Pfizer Laboratories; Bert Swedin, Robert Johnston, E. R. Squibb & Sons; Joe Napoleon, Hyland Laboratories; J. R. Schoenwetter, Stanton Scientific Equip. Co.; Bob Walker, Norden Laboratories.

Alex Miller, R. B. Croslin, Parke, Davis & Co.; Dr. A. Mack Scott, Charles S. Travers and Herb Warren, CSVMA.

## "Life With Rover"

An amusing and factual booklet on dog care, "Life With Rover," has been published by Fromm Laboratories, Inc., Grafton, Wis. Illustrated with cartoons and extremely readable.

Particularly appealing are the cartoons of the wolf dog, Egyptian dog, and Papa Rover himself on the page devoted to a brief discussion of canine breeds and history. Typical section headings are "Sniffing Around the Ancestral Tree," "It's So Nice to Have a Dog Around The House," and "The Gay Old Dog and Keeping Him Gay."

But over and above the fresh approach, the pages of this small booklet are packed with information on housebreaking, discipline, and feeding. Veterinary care is, of course, spotlighted. Disease and disease control through proper vaccination are stressed, and a page is provided for the veterinarian or dog owner to record vaccination dates and other pertinent medical data.

Copies of the booklet in quantity are available from Fromm distributors with orders of Fromm Biologicals.



## Veterinary Drugs and the Board of Pharmacy\*

FLOYD HEFFRON, *Executive Secretary, State Board of Pharmacy, San Francisco*

My subject for today is "Veterinary Drugs and the Board of Pharmacy." The law, as it presently exists, brings our professions into a common pattern. One which gives our board the right to control the sale of certain dangerous drugs when they are used in the practice of veterinary medicine, but does not have any bearing on the practice of your profession otherwise. This is not an uncommon circumstance. We are in the same position in relation to the practice of medicine, dentistry, and chiropody. Our control over certain products extends to their manufacture, distribution and dispensing. It also leads into the fields of nursing, hospital procedure, wholesaling operations and other related fields.

One problem which causes us considerable concern is that of proper control over dangerous drugs. The enforcement of this law leads us into the investigation of illegal possession cases, cases involving illegal importation of drugs and illegal interstate shipment. Those drugs which are causing us most concern at the present time are the hypnotic drugs and those containing amphetamine and desoxyephedrine.

In comparing the laws, state and federal, we find that California law is somewhat more restrictive than federal legislation, in controlling the sale of dangerous drugs. Sales of dangerous drugs are limited to prescription only. Our law includes the words (section 4227) "No person shall furnish any dangerous drug except on the prescription of a physician, dentist, chiropodist or veterinarian." Those prescribing dangerous drugs must be authorized to practice in this state by a currently valid and unrevoked license to practice in their respective professions and are limited to prescribing only within the scope of their practice.

Section 4211 of the Business and Professions Code defines dangerous drugs as follows: "'Dangerous Drug' means any drug unsafe for self-medication, except preparations of drugs defined in subdivisions (e), (f), (h), and (i) hereof, designed for the purpose of feeding or treating animals (other than man) or poultry, and so labeled." The prescription restriction applies to any drug included in this section, unless otherwise specifically exempted. Those which are exempted "when designed for the purpose of feeding or treating animals (other than man) or poultry and when so labeled, are set forth in subsections (e), (f), (h) and (i) and include: ergot, cotton root, diethylstilbestrol, thyroid

and the sulfonilimide group. The only basis for exemption of these preparations is "That they are designed for veterinary use and are so labeled." The word "designed," as used in this section, means that the product must be one which, due to its nature, size of the package, suggested method of application, etc., indicates that it is intended for veterinary purposes. To be properly labeled, the package must bear adequate directions for use and include the seven points of information required by the Federal Drug Regulations. Products so designed and properly labeled are exempted from the dangerous drug act on the basis that they are then considered safe for self-medication when used for veterinary purposes. U.S.P. and N.F. preparations, even through exempted from the prescription requirement, will still be limited to sales by pharmacists, in licensed pharmacies, unless otherwise specifically exempted.

According to federal law, any product containing barbituric acid, amphetamine, desoxyephedrine, or any derivative thereof, or any hormone (other than diethylstilbestrol, when used as a growth stimulant), when designed and intended for veterinary purposes, must bear the label: "Caution—This product may only be sold by or on the order of a licensed veterinarian." It does appear that many of the products requiring this label are not properly labeled. We find a number of labels in variance with the federal requirement, although they are generally considered as acceptable by the F.D.A.

One of the more common variations in labels bears the words: "May be sold only to veterinarians." To this we have absolutely no objection; however, we are definitely interested in who sells these products to veterinarians and particularly how they determine that the person to whom they are selling their product is licensed to practice veterinary medicine in our state. As you well realize, some people who peddle veterinary drugs are quite easily convinced, particularly where a profitable sale is involved. Although no one can object to an owner administering to his own animals, we have every reason to object to the illegal distribution of such products by persons who are not trained or licensed in our state to diagnose illnesses and prescribe treatment for animals.

Regardless of the fact that the label, or the instructions in the package, bear all of the points required by federal law, there is a great deal more to the practice of veterinary medicine than merely the following of instructions. The mere ability to follow printed in-

\*Presented at the CSVMA Convention, Los Angeles, June 11-13, 1956.

structions does not qualify a person to recognize the symptoms of a specific condition, nor does it qualify him to recognize possible ramifications that may result from the existing condition, or from the treatment recommended. There, too, the monetary return from a sale may tend to influence the better judgment of the self-styled practitioner. It is felt that the trained practitioner has a sincere interest in correcting any condition he diagnoses and will recommend a specific remedy for its treatment, disregarding monetary gain, other than that normally charged for professional services rendered.

There seems to be considerable variation in the opinions of experts as to the possibility that certain types of medication, particularly antibiotics and hormones, may be retained in the flesh of animals and poultry and eventually affect the consumer. With the present tendency to use these products as growth stimulants, with little or no control, some feel that there is this possibility. It will be interesting to see the results. Experience has shown that many years of constant use may be necessary before deleterious effects caused by certain types of medication become apparent. Products considered dangerous drugs should be used sparingly until all possible conditions resulting from their use have been definitely established.

The use of antibiotic drugs, particularly those used in the treatment of mastitis, has already created some problems worthy of our consideration. Without expert advice for the proper treatment for such a condition, some dairymen apparently do not take an animal out of production during mastitis treatment. The medication, usually antibiotics in combination with other drugs, is carried directly into the milk supply. The first indication that such a practice was common came from cheese manufacturers, when it became evident that the bacteria necessary to produce cheese were no longer active in the milk. This is a rather strong indication that antibiotics may also be contained in milk supplies distributed for human consumption. The question arises, will consumers eventually become insensitive to these drugs if they are subjected to small but continuing doses? If such a possibility does exist, it would be most unfortunate if even one human life was lost because a sensitivity to a specific medication resulted from the misuse of such drugs in the treatment of an animal disease.

There is also an indication that some milk producers have resorted to the use of such products, introduced directly into the milk supply, to reduce the bacteria count to an acceptable level. I feel certain that if such a condition does exist, it will be overcome by the industry itself. I have been informed that many purchasers are now running tests for the presence of antibiotics in milk supplies in

addition to the normal tests conducted. By rejecting supplies received from dairies which resort to such practices, and those who keep infected animals in production while being treated, this condition will be overcome by elimination of possible offenders.

I feel that those of us who are familiar with the dangers that may result from the misuse of dangerous drugs, regardless of how remote they may appear, cannot help but show sincere concern. Our mutual responsibility is to the people of our great state. The statutes are drawn with that specific purpose in mind. Professional people are licensed, after their ability has been established by suitable methods, to perform certain functions. If our legislature felt that special qualifications were not necessary to practice in professional fields, there would be no law that would require you and me to be licensed. It is my belief that the practice of any profession, particularly those in the healing arts, should be strictly limited to those who have complied with all of the educational requirements and have qualified by demonstrating their ability and their right to practice in a particular field.

Although it is generally considered that we have more laws than are necessary to control the practices of professional people, we wonder if these laws are sufficient to restrict some of the illegal practices of non-licensed practitioners. Even though we may have no desire for more restrictive legislation, if it is felt necessary, new laws should be encouraged. Laws are necessary to control, or prohibit, the acts of a small number of our citizens; however, we are particularly concerned with that minority.

The Attorney General has ruled that dangerous drugs bearing the prescription legend may only be sold by or on the order of a physician, dentist, chiroprapist or doctor of veterinary medicine. A veterinarian may possess or dispense such drugs himself, or they may be dispensed by a pharmacist on prescription. There is no provision in the law for anyone, other than a registered pharmacist, to fill a prescription and the compounding of prescriptions is restricted to pharmacies licensed by our board. There is no doubt that our respective professions will be accused of having a selfish interest in enforcing these restrictions. Regardless of possible insinuations in this regard, I assure you that the interest of our board has no such implication.

In addition to the misuse of dangerous drugs in the treatment of animals, we have had numerous reports, many from members of your profession, which indicate that certain dangerous drugs are being used for human consumption even though they are designed, intended and labeled for use on animals. Although we recognize the purity and strength of these drugs to be comparable in most re-

*(Continued on page 49)*



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## ✦ REPORTS OF COMMITTEES ✦

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### **Mastitis Control Committee**

Resolution introduced by Dr. Robert Ormsbee, Chairman, Mastitis Control Committee, and passed at the Business Session of the California State Veterinary Medical Association, June 11, 1956.

WHEREAS, preparations intended for intramammary treatment of dairy cattle are containing an increasing quantity as well as variety of antibiotics and other agents; and

WHEREAS, certain responsible agencies have stressed that some danger exists of sensitization from the ingestion of penicillin-bearing milk, and have postulated dangers from the promiscuous use of other antibiotics and additives in the treatment of mastitis; and

WHEREAS, severe economic loss to the industry accrues as a consequence of attempts to use antibiotic-bearing milk for the manufacture of certain dairy products; and

WHEREAS, it is to the interest of the dairy industry that unfavorable publicity stemming from the use of antibiotic-bearing milks be avoided; therefore, be it

RESOLVED, that the Federal Food and Drug Administration, the State Department of Health, and The California State Division of Animal Industry be urged to consider the feasibility of requiring products intended for intramammary treatment to certain dyes or other tagging substances to facilitate the detection of milk from cows so treated which inadvertently finds its way into milk intended for human consumption; and be it

FURTHER RESOLVED, that copies of this resolution be sent to commissioners or directors in charge of the above Agencies.

Respectfully Submitted:

ROBERT ORMSBEE, *Chairman*  
FRANK PELLISSIER  
O. W. SCHALM  
R. V. JESSUP

• • •

### **Ethics Committee**

Paragraph 1: During the past year the Committee on Ethics of the CSVMA has investigated and brought to a harmonious conclusion all cases cited to it—in each case it has received the sincere cooperation of the defaulter and has enjoyed acquaintanceship with him—we, the Committee, believe that better understanding has resulted on both sides.

Paragraph 2: The Committee on Ethics of

the CSVMA is of the opinion that there is not enough time and instruction in professional ethics and good business practices—i.e., honest and fair business practices, given to the graduates of most veterinary institutions.

Paragraph 3: The Committee on Ethics of the CSVMA recognizes that, in the majority of cases, the Dean of such an institution cannot be expected to give such instruction, because he has had no, or very limited such experience—however, the Committee is of the opinion that there should be some competent, active member versed in these subjects on every veterinary institutional staff roster.

Paragraph 4: The Committee on Ethics of the CSVMA respectfully requests that this report be published, at the earliest opportunity, in the official magazine of the CSVMA, and further, that Paragraphs 2, and 3 of this report be incorporated in a suitable letter to emanate from the office of the Executive Secretary of this Association, and to be sent to the Dean of each institution engaged in veterinary education that is recognized by the AVMA.

Paragraph 5: Further, that a copy of such letter be furnished to the current Committee on Ethics of the CSVMA, together with a list of the institutions to which such letter has been addressed.

Respectfully Submitted:

CHARLES H. REID, *Chairman*  
E. H. HOUCHIN  
R. TANGEMAN

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### **Membership Committee**

Active members in the Association at the beginning of the year numbered 947. Nine members died, 16 members were dropped for nonpayment of dues; 111 new members joined, making a total of 1034 at the end of the year.

Fifty-two of the new members were seniors graduating this month at Davis, who signed applications after a talk by the Secretary late in May. The Secretary also sent out a list of non-members to secretaries of the local associations. In all, 97 new members were signed up since the January meeting.

Respectfully Submitted:

F. B. WALKER, *Chairman*  
KENNETH L. JOHNSON  
ROSS H. HURT  
ROLLIN R. SMITH  
GILBERT JACKSON  
A. J. EISENHOWER

## Reorganization Committee

In the absence of this committee, Dr. Joseph M. Arburua, Dr. E. E. Jones and Dr. E. H. Houchin, Dr. A. M. McCapes appointed Dr. W. W. Putney to conduct the meeting and submit a report to the Executive Committee. This report follows:

This committee does feel that a proper reorganization would be mutually beneficial to the State Association, local associations and the individual member.

The committee feels, that as outlined, the plan submitted is not feasible as it would not achieve the purposes intended, as aforementioned.

This committee recommends that no action be taken at this time and that a committee be appointed with representation of all local associations to further study this reorganization plan.

Respectfully submitted,

W. W. PUTNEY, *Chairman*  
C. H. REID, *Chairman SCVMA*  
R. L. STOWE,  
*Chairman Bay Area VMA*  
M. H. SCHAFFER, *Chairman*  
*Redwood Empire VMA*  
P. C. OLSON  
B. F. PIKE

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## Program Committee

The Program Committee made a brief report. Upon the death of Dr. Charles D. Stafford last year, Dr. Howard Carroll arranged for the Midwinter Conference, and Drs. Fred J. Walker, Jr., and Reginald A. Stocking arranged the program for the annual meeting at the Statler Hotel. Complete committee comprises: Dr. Fred J. Walker, Jr., Dr. Howard Carroll, Dr. Reginald A. Stocking, Dr. Donald E. Barr, Dr. Edward A. Rhode and Dr. John Carricaburu.

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## Resolutions Committee

During the year the following members of our Association were taken by death:

Dr. Stanley R. Cooper	Dr. Burman J. Elander
Dr. Martin Hull	Dr. Frank E. Kling
Dr. Benjamin H. Priest	Dr. Frank B. Perdue
Dr. Charles D. Stafford	Dr. C. Edward Taylor
Dr. Carol Adams	Dr. Milton R. Evans

A proper resolution has been sent to each family as soon as the death was reported.

Respectfully submitted,

CHARLES J. PARSHALL, *Chairman*.

## Dr. Joseph Arburua Re-Elected to Executive Board, District VI, AVMA

CSVMA-sponsored Dr. Joseph M. Arburua was re-elected as a delegate to the Executive Board, AVMA, representing District VI.

His re-election is for a term of five years beginning at the conclusion of the Board Ses-

## Swine Breeders Adopt Health Program

Swine disease annually cheats the California swine producer out of thousands of dollars and endangers the health of his family and livestock. Recognizing this problem a group of swine producers have, under the sponsorship of the California Pork Producers Association, formed the California Swine Health Certification Program. This health program is patterned after plans which are in operation in Indiana, Michigan and Wisconsin.

The purpose of this program is three-fold. It is expected to promote better management practices among breeders. It should also be a definite aid in recognizing swine diseases at an early stage, so that they can be more easily controlled. It would limit the spread of disease from one breeding herd to another.

The California Swine Health Certification Program is entirely voluntary, therefore, a swine producer may elect to join the program or stay out. The Bureau of Livestock Disease Control of the State Department of Agriculture and the School of Veterinary Medicine of the University of California have agreed to act in an advisory capacity and assist in the detection of certain diseases. It is the practicing veterinarian who will assume the major role in this program. All inspection, observation and blood collection is to be done by him and paid for by the swine producer. This program is novel in that the producer has recognized the importance of disease and he has asked the practicing veterinarian to aid in its prevention.

The State Brucellosis Testing Program is not considered as part of the Health Certification Program, but if a herd is to have a satisfactory rating it must be State Certified Brucellosis Free. Herds entering the program will be inspected twice by a veterinarian within a 90-day period for evidence of infectious disease. Thereafter, additional inspections shall be made approximately every six months. Participating breeders will furnish animals for autopsy or other clinical tests. The breeder will submit heads, both normal and those having naso-facial distortion, for laboratory examination to aid in the diagnosis of atrophic rhinitis.

If the California Swine Health Certification Program gains general acceptance, it will aid in the control of swine disease and furnish another legitimate source of income for the practicing veterinarian. Any veterinarian who is interested in participating in this program should contact Jesse T. Bell, California Pork Producers Association, Fresno State College, Fresno, California.

sions in San Antonio in October.

The good wishes of his many friends in the CSVMA go with his re-election to this high post.

# The Possibility of Transmission of Serum Hepatitis Virus by Intracutaneous Injections\*

PROF. DR. CHARLOTTE RUYSS and JOHA. PRAKKEN†

*From the Hygiene Laboratory of the University of Amsterdam*

Since it is known that the virus from serum hepatitis can be transmitted by articles which merely contain traces of blood, the rule holds that for every injection a sterile syringe and needle must be used. This has its handicaps, however, in a series of intracutaneous inoculations. In the first place, one must, in order to make possible an exact dosage, draw in more of the liquid to be injected than the required small quantity for the injection. Further, in the syringes, which are boiled for disinfection, remains a good deal of moisture that mixes with the drawn in liquid, which does not permit a good dosage. The use, at every turn, of a clean syringe and needle for every injection also brings with it a certain amount of inaccuracy and a higher use of the material to be injected.

The question is put before us if it would not be sufficient for intracutaneous inoculations to fill the syringe with, for example, 10 doses and only use a new needle for every person. One was of the opinion that by intracutaneous vaccination the injected liquid should remain in the skin under such great pressure that no tissue moisture or blood from the injected person could flow back into the needle.

In order to test this opinion we have now further investigated the syringes, which were used on the students for the Schick reaction. For each student a 1 cc. syringe with needle No. 20 was used and was filled with only one dose of Schick-liquid. After each use the syringe and needle were boiled in distilled water. In all, 60 students were vaccinated by skilled doctors with Schick toxin and the control liquid (heated toxin). In as far as possible, after each injection the first drop which could be secured from the needle was received upon a small glass. After that the needle was removed and the moisture on the tip likewise placed on a small glass.

At first the drops were examined for blood corpuscles under the microscope with very little enlargement. However, it was not possible to work rapidly enough so that the drops did not dry up. Subsequently, therefore, the dried up drops were fixed with methyl alcohol and colored with Giemsa solution.

For the control, several drops of Schick-liquid were infected with traces of blood in order to check how the blood corpuscles react in this liquid. It appeared that after drying and coloring, erythrocytes, lying singly, sometimes

took on bizarre forms and were not always easily recognized. Small groups of erythrocytes, however, gave such a characteristic picture that there was no doubt.

In the drops which could be investigated wet erythrocytes were found three times in those out of the needles and once from the tip of the syringe. In one of the colored drops of the needles, however, a group of several hundred erythrocytes was found. Through an oversight, the total number of drops from the needles investigated was not noted. Upon investigation of 87 colored drops from the tips of the syringes, very questionable forms were found in 10 cases, which in comparison with the control preparation could not be differentiated from erythrocytes. A large group of erythrocytes such as we saw in the drops coming from the needles was, however, not observed.

An attempt by Dr. H. C. Zanen, with the help of an anti-human serum, to demonstrate human albumen in the liquid out of the needles and tips failed for the present because technical difficulties were encountered.

We are, however, of the opinion that with our experiments it is proven that by the giving of intracutaneous injections one also runs the danger of having blood corpuscles from the recipient enter the needle. It stands sufficiently firm that the contents of the syringe also can become contaminated even if one removes the used needle and replaces it with another.

Only if through special arrangements (valve and suchlike), one is in a position to hinder this flow back to the syringe, it shall be justifiable to use the same syringe for a series of intracutaneous injections.

## Summary

Erythrocytes of the receiver may be present in needles which have been used for intracutaneous injections. Consequently with these injections, too, there is a real danger that the virus of serum hepatitis may be transmitted.

December, 1954—Translated from the Dutch by S. L. Laake.

## Dr. Siegrist to Speak at BCVMA

Dr. J. C. Siegrist, Schering Laboratories, an expert on cortico-steroids, will address the Bay Counties VMA, Tuesday, August 14, at 7:30 p. m. Members of local associations are invited to hear him. Advise Dr. Henry Burns, 1122 E. 8th St., Oakland, how many will attend from your group. Meeting place: The Willows, 510 17th St., Oakland.

\*Reprinted, with permission from the *Ned. Tijdschrift voor Geneeskunde*, Vol. 99, No. 16, April 16, 1955.

†Doctor, at the time assistant.

**CONFIRMED  
CLINICAL  
INVESTIGATIVE  
REPORTS ON  
METICORTEN**

**IN SUMMER  
ECZEMAS ...**

*"efficacious"*<sup>1</sup>

*"good results"*<sup>2</sup>

**IN BOVINE  
KETOSIS ...**

*"highly effective"*<sup>3</sup>

*"excellent results"*<sup>3</sup>

*"most gratifying"*<sup>4</sup>

**IN STRESS  
CONDITIONS ...**

*"best use"*<sup>2</sup>

*"valuable"*<sup>1</sup>

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of diarrhea....*

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*Propulsive*  
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*and the*  
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REDUCES SPREADING AND SECONDARY INFECTION

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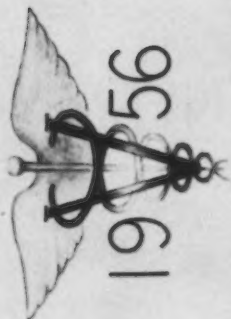
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## Our 1956 Graduates

Donald E. Jasper, D.V.M., Ph.D.

Dean, School of Veterinary Medicine, University of California, Davis

Fifty-one of the fifty-two admitted to the School of Veterinary Medicine in 1952 have now graduated. As individuals they are, of course, different from any other class. The composite picture, on the other hand, does not differ greatly from those who have preceded them.

The greatest single change is in the number with veteran's status. Whereas 30 of last year's graduates are veterans, only 16 of this year's class have served in the military. Even so, the average age dropped only from 28 to 27.84 years. The youngest graduate was again 23 years of age.

This year's class averaged 7.8 years of college, varying from one student graduating with the minimum of six years to one student having completed 11 years of college. These figures have not changed greatly for the five classes graduated, having varied from 8.1 to 7.5 years of college.

The current class was a family man's class. The 35 married men averaged 2.06 children each, not counting the children obviously or secretly on the way at time of graduation.

Forty-nine were California residents when admitted, one was from Wyoming, and one from Israel. Plans call for 43 to remain in California, two to go to Oregon, and one each to Colorado, New York, Massachusetts, Maryland, Wyoming, and Israel.

Most of those planning to practice strongly

desire to work first with an established Practitioner. Thirty were successful in making an association of this type, nine in strictly small animal hospitals and 21 in mixed practices. Positions are hard to find with large animal practitioners. Seven will start on their own, four in mixed practice, two in small animal practice, and three in large animal practice.

Other occupations include three internes in veterinary school clinics, three entering graduate training in fields of biochemistry, microbiology, and anatomy, and one each with the VSDA, California State Department of Agriculture, Angell Memorial Hospital in Boston, and the Army. One is now manager of the hospital and research institute at the San Diego Zoological Gardens, and another is a poultry disease consultant for a commercial feed concern. Two are undecided. It would appear that at least seven or about 14 per cent will engage in activities other than practice.

Despite the tremendous increase in the veterinary population in California during the past few years, positions seem to continue to be as plentiful for new graduates one year as another. Although there is no overabundance of opportunity, most graduates are able to find a satisfactory situation. If the profession continues to expand its services as it should, to the livestock and animal owning public there seems to be no reason why each new class should not find a ready need for their services.

## New Federal Animal Disease Laboratory

Upon the request of Dr. H. E. Kingman, Jr., Assistant Secretary, AVMA, that we contact Senator William F. Knowland, asking support for appropriation requests of the USDA for establishment Federal Animal Disease Laboratory, we immediately wired the Honorable William F. Knowland as follows:

*"Urgently ask your support appropriation request USDA for establishment Animal Disease Research Control Laboratory site for construction to be determined later by Congress. Matter to be debated in Senate Tuesday twenty-second."*

The appropriation has been granted about nineteen million dollars. We have received from Romain Young, Assistant Secretary, California State Board of Agriculture, the following letter:

*"Transmitted herewith is a recommendation passed by the California State Board of Agriculture, at its regular meeting held in Los Angeles, June 18, 1956. The recommendation pertains to the location for the Federal Animal Disease Laboratory."*

The recommendation told elaborately of the facilities at Davis and recommended Davis for the site. It stated that copies of the recommendation be forwarded to the Site Selection Committee, Secretary of Agriculture, Staff Members of the United States Department of Agriculture concerned with the facilities, et cetera.

This office has contacted Senator William F. Knowland; Secretary of Agriculture, Ezra Benson; Senator Thomas H. Kuchel and Congressman William Mailliard for their support and influence in bringing this Federal Animal Disease Laboratory to Davis.

Doctor Donald E. Jasper, Dean, School of Veterinary Medicine, Davis, went to St. Louis to confer with the Selection Committee.

"The Committee seemed to be well impressed with the climatic, cultural and scientific advantages of a location at Davis. One could sense, however, a strong feeling that the laboratory should be placed in a more geographically central location within the United States. The Committee therefore selected Ames, Iowa," said Dr. Jasper.



## Sacramento Livestock and Poultry Pathology Laboratory

Dedication ceremonies were held June 8, 1956, for the recently completed Sacramento Livestock and Poultry Laboratory. The new laboratory is located on Meadowview Road, between Freeport and Franklin Boulevards, south of Sacramento.

Director W. C. Jacobsen, who presided as host for the dedication, spoke of the planning from experience which was devoted to the new facility, and the invaluable cooperation which the livestock industry and all farm organizations gave in formulating the program which resulted in the building of this laboratory and those at other locations.

"The Sacramento Laboratory enjoys a distinct advantage," the Director said, "because it will serve not only the important livestock producing areas of northern and central California, but its proximity to the University of California laboratories and School of Veterinary Medicine at Davis will benefit both regulatory and research phases of livestock disease control in California."

Lieutenant Governor Harold J. Powers, who headed the group of State officials and industry representatives at the dedication, paid tribute to the California Department of Agriculture for its "farsighted livestock disease control program, which has developed as an integral part of the progress of California's ever changing economy."

Dr. Arthur G. Boyd, Assistant Director of the Department of Agriculture, declared that the effective disease diagnosis to the degree made possible by such a modern laboratory facility ranked in the first line of defense in the State's campaign for the finest possible livestock sanitation program. "Without such a program of effective diagnosis in this State, where the disease control program is so complex, producers could be wiped out," he said.

Dr. J. E. Stuart, Chief of the Division of Animal Industry, pointed out: The area to be served by the Sacramento laboratory produces livestock and poultry with a total value in excess of \$168,000,000, annually.

Others at the dedication included Dr. H. G. Wixom, Chief of the Bureau of Livestock Disease Control; Dr. Donald E. Jasper, Dean of the School of Veterinary Medicine, University of California; Carl K. Lawrence, representing the construction company which built the laboratory; Milton M. Reiman of Planada, State Board of Agriculture member representing livestock interests; E. W. Hampton, Assistant State Architect, represented the Division of Architecture; and Dr. R. J. Anderson, Chief of the Animal Disease Eradication Branch, U. S. Department of Agriculture.

Dr. Thomas W. Jackson will be the veterinarian in charge of the laboratory, under Dr. W. W. Worcester, statewide supervisor of Department of Agriculture laboratories.



Above, left: Lieutenant Governor Harold J. Powers, main speaker, and Dr. W. C. Jacobsen, Director, Calif. Dept. of Agriculture. Below: Dr. A. G. Boyd, left, Asst. Director of Agriculture, and Earl W. Hampton, Asst. State Architect.



## Some Aspects of Coccidioidomycosis\*

JAY D. HOOP, D.V.M., *Practitioner, Fresno*

Coccidioidomycosis is a fascinatingly puzzling infection that has plagued the human field for over 60 years, since it was discovered by Rexford and Gilchrist in 1896. Not until 1934, when Stewart and Myer isolated the spore from the soil on a ranch in the San Joaquin Valley was it held of much significance to California. Since that time, numerous highly endemic areas have been found in the southwest portion of the United States.

Coccidioidomycosis is an infectious disease caused by the fungus *Coccidioides immitis*, the spores of which enter the body through the respiratory tract. The spore cannot survive in the digestive tract. *C. immitis* has both a tissue spirogenic (or parasitic) phase, and a cultural mycelial (saprophytic) phase. Spherules develop from fragments of mycelium (or arthrospores) which enter with dust through the nares and mouth to the upper air passages. Growth of the fungus in tissues occurs by means of endospores which, after liberation from the spherules, redevelop in the tissues into mature endospores. The incubation period is 10 to 16 days, and it is relatively non-contagious.

*C. immitis* has been cultured from the soil and from wild rodents in endemic areas. It has been suggested that these animals would serve as a reservoir of infection. *Coccidioides* infection occurs in most animals and persons within four years of residence in such regions, but 60 per cent of these animals and people show no symptoms and are entirely unaware that they are infected. Clinical manifestations have been seen in cattle, wild rodents, dogs, swine, sheep, and a gorilla. The gorilla died on about the 45th day of illness; dyspnea and intermittent hemorrhage from the nares were observed, and autopsy presented spherules and granulomatous lesions in lungs, liver, and lymph nodes.

In the more than 600 cases reported in cattle, mostly older cattle and calves eight to ten months old were affected. Feed lot animals seemed to have a high incidence of infection, while those shipped in for slaughter escaped it. Subcutaneous injection of cattle produced an infection limited to the point of injection and the regional lymph nodes. Intravenous injection into calves has produced a fatal infection.

The clinical manifestations vary with the areas of involvement. In the asymptomatic form, mild and self-limiting lesions are found in the lungs. Such cases are missed by the veterinarian unless skin tested; they usually respond to the test.

The symptomatic form is an influenza-like

primary disease, very acute in onset, accompanied by fatigue, cough, malaise, and weight loss. Lung lesions are often present. Unless the infection becomes disseminated, the animal has an excellent chance of recovering and remaining asymptomatic. The symptomatic form will usually respond to the skin test.

The progressive, or disseminated, form is seen in man, especially in the colored race. It is apparent from published research reports that the dog is also prone to the disseminated type. This form involves lymphnodes, spleen, skin, liver, and kidneys. Bone lesions are usually multiple. The process in man is purely destructive, and it has been stated that marginal erosions are always accompanied by a soft tissue abscess which frequently calcifies at a later date. Destructive lesions with periosteal new bone formation and changes resembling those of osteomyelitis have been seen in both man and dog. However, in dogs a more constant finding is bone production and excessive enlargement rather than destruction. Hage and Molton reported extensive growth in the appendicular bones with bulbous or fusiform masses which, on section, appeared uniformly cancellous and relatively free of

(Continued on page 42)

### American Animal Hospital Association Meeting

The 23rd annual meeting of the American Animal Hospital Association was held in the Hotel Fontainebleau, Miami Beach, Florida, May 23-26. More than 750 veterinarians attended.

According to all reports it was a highly successful meeting, attracting many small animal practitioners from the West.

A guest speaker at the scientific session was Dr. Theodore J. Hage, School of Veterinary Medicine, Davis, who spoke on "Gadgets for Radiology."

California members of the Association who presented papers were: Dr. S. R. Roberts, Richmond; Dr. Darr Jobe, Temple City; Dr. Philip L. McClave, Reseda; Dr. Myron A. Thom, Pasadena, and Dr. William J. Zontine, Lancaster.

Social activities included the annual golf tournament at the Plantation Golf Club, swimming, tour of the seaquarium, the annual banquet, and a post-convention tour to Havana.

Dr. James A. Yarborough, Miami, was installed as president. Other officers are: Dr. Joseph A. R. Millar, president-elect; Dr. William G. Magrane, vice-president; Dr. Wayne H. Riser, executive secretary, and Dr. Arthur R. Theobald, treasurer.

\*Presented at the CSVMA Convention, Los Angeles, June 11-13, 1956.

## 93rd Annual AVMA Convention

San Antonio, Texas, will host the 93rd Annual Convention of the AVMA, October 15-18, with meetings in the Municipal Auditorium.

For the first time the AVMA will convene in the Lone Star State—and in one of its most historic spots. This is also the first time in over 35 years that the convention has been held later than September.

General Sessions will be held in San Antonio's fine Municipal Auditorium, as well as most of the Section Meetings, Commercial and Scientific Exhibits and the closed-circuit television demonstrations.

A post-convention tour and adjourned session is planned in Mexico City following the convention, where a final session will be held at the ultra-modern veterinary school in University City where the National Autonomous University of Mexico is located. The adjourned session will be held on Saturday, October 20.

Information about accommodations in and around San Antonio may be obtained by writing the Association's office, 600 S. Michigan Ave., Chicago 5, Ill.

## Aspects of Coccidioidomycosis

(Continued from page 41)

fluid exudate, with most of the proliferation in the periosteum.

Diagnostic aids available to the practitioner include X-ray and post-mortem findings, and skin tests. Coccidioidin may be obtained undiluted or diluted 1:100. The undiluted coccidioidin remains potent for nine years; the diluted, if refrigerated and sterile, remains potent for six months. Coccidioidin is very heat-stable, withstanding autoclaving for 30 minutes at 15 pounds pressure. This is significant: since the activity is not destroyed by customary means of sterilization, a single syringe must be used exclusively for this solution.

In disseminated cases, undiluted coccidioidin or dilutions of 1:10 must be used; otherwise the test will usually be negative. In man it has also been found that 1:100 dilutions give poor results in granulomatous coccidioidomycosis. Undiluted coccidioidin will give a reaction in positive cases in 24 to 48 hours after standard injection. There is no cross-sensitization with tuberculin, nor is there passive transfer of sensitization.

There is no effective treatment. In fact, Burger and Levan found that failure to respond to any and all antibiotics and serum therapy suggested coccidioides infection. Most cases that fail to recover are of the progressive form; those that recover spontaneously are not seen by the veterinarian.

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Farrns, O. J.: Coccidioidin Infection in a Dog, *J.A.V.M.A.*, September, 1940.  
Reed, R. E.: Diagnosis of Disseminated Canine Coccidioidomycosis, *J.A.V.M.A.*, February 15, 1956. Serology and Coccidioidin Skin Testing in Diagnosis of Canine Coccidioidomycosis, *A.V.M.A. Proceedings*, August, 1954.  
Schwartz, J., and Muth, J.: Coccidioidomycosis—A Review, *Am. J. Med., Sci.*, June, 1951.  
Wilson, J. W.: Coccidioidomycosis as a Tool in Study of Granulomatous Disease, *Calif. Med.*, April, 1953.

## Milton P. Duffy Receives Harvey W. Wiley Award

First person to have the distinction of receiving the Harvey W. Wiley Award is Milton P. Duffy, Chief of the Bureau of Food and Drug Inspections, California State Department of Public Health. "In recognition of outstanding service and devotion to duty in administering the Food and Drug Laws of his state—and the leadership and guidance he has provided to his fellow workers throughout the Nation," the award was presented to Mr. Duffy in New York City on May 10, 1956, by the Association of Food and Drug Officials of the United States on the fiftieth anniversary of the enactment of the first federal food and drug law and the sixtieth anniversary of the founding of the association.

Presentation of the award, named for the author of the Nation's first pure food and drug law signed by President Theodore Roosevelt on June 30, 1906, was made by G. Cullen Thomas, Chairman of the Citizens' Advisory Committee on the Food and Drug Administration.

Among the visitors at the 68th annual convention were four veterinarians from Yugoslavia: Drs. Mihajlo Mirkovic, Petar Matijasevic, Mirko Francetic and Ivan Sijakov. They were greeted by Dr. A. M. McCapes.

## IMPORTANT

It should be called to the attention of every Veterinarian that the Chick Embryo Vaccine is recommended to be used ONLY for dogs.

It particularly should not be used for skunks, regardless of the dosage used.

# Use of Skin Autograft for Reconstruction of the Lateral Ligament of the Elbow Joint in a Dog\*

RALPH C. VIERHELLER, D.V.M., and FRANZ ABT, D.V.M., M.S.

On March 24, 1956, a five-month-old female Pekingese was presented to us with a luxation of the left humero-radial articulation. The humero-ulnar portion of the elbow was not disturbed. The dog made almost no effort to use the leg.

**History:** The case came by reference from a veterinarian who had treated the case with a splinting technique. The joint had failed to improve after ten days of immobilization. The history further revealed that the dog had been lame for approximately one month before veterinary aid had been sought.

**Clinical Examination:** Examination of the leg demonstrated that the luxation could be reduced easily by digital pressure, but that it displaced laterally as soon as the pressure was released. An X-ray of the leg did not show any bony defect except the separation of the radius and ulna and the luxation of the joint.

**Diagnosis:** Ruptures of the left lateral ligament of the elbow joint and interosseus ligament of the radius and ulna.

**Surgical Procedure:** Since holding the joint in apposition for an extended period had already failed to promote healing, we decided to try to manufacture a new lateral ligament. Just three days before receiving the patient, we were fortunate in hearing Dr. W. W. Armistead speak on research on the use of buried skin autografts.<sup>1</sup> We had also read Dr. Armistead's report on the same subject matter in the Gaines Dog Research Progress Bulletin.<sup>2</sup> With this material fresh in our minds we decided to try skin in this case.

The patient was prepared in the following manner: Nembutal was given intravenously until a deep plane of surgical anesthesia was obtained and an endotracheal tube was inserted because of difficulties in breathing. Both the area of the left elbow and the inside of the right thigh were prepared for surgery by shaving, cleaning with surgical scrub-soap containing 1 per cent hexachlorophene followed with ether, and finally by painting with tincture of mercuriolate. Draping consisted of a length of sterile stockinette over the left front leg. A hole was later cut through the stockinette at the surgical area. The entire dog was then covered with a fenestrated drape.

A longitudinal incision over the lateral aspect of the left elbow was made extending well above and below the joint. The antebrachial fascia was then parted in the same direction to expose the intermuscular septum between the common and the lateral digital extensor.

These muscles were then separated down to the shaft of the radius. The shaft of the radius

was exposed by blunt dissection except for the interosseus portion.

A bone drill equipped with a  $\frac{1}{8}$  inch bit was used to drill a hole (lateral to medial) through the shaft of the radius just distal to the neck, approximately one and one-half inches below the articulation with the humerus.

Next a strip of skin about  $\frac{1}{4}$  inch wide and six inches long was dissected from the inside of the right thigh. The resultant wound was partially closed to avoid its gaping while the operation was completed on the elbow.

Returning to the elbow, the skin strip was drawn through the hole in the shaft of the radius with a loop of suture wire. About equal portions were left extending from each opening in the bone. The part of the skin strip emerging from the medial opening in the shaft of the radius was drawn upward across the joint and anchored by looping it around a part of the tendons of origin of the common digital extensor and the extensor carpi radialis. The tendons were prepared for this by perforating and undermining them with pointed surgical scissors.

We were careful to keep the epithelial surface of the skin strip facing the bone so that the subcutaneous surface of the free end could be sutured to the subcutaneous surface of the fixed end. Vetafil (.03mm.) was used for this purpose, a number of small interrupted stitches being applied. The skin strip emerging from the lateral opening was drawn upward over the joint and anchored in the same manner at a point just posterior to the foregoing. Interrupted sutures, of Vetafil, were used to close the antebrachial fascia. Then the skin of the elbow and the inside of the thigh were closed in like manner.

**After Care:** A light dressing was applied to the elbow joint, and the leg immobilized with a Thomas splint. Additional post-surgical care consisted of penicillin, 300,000 I.U. daily for four days. The Thomas splint was removed after six days.

We were pleasantly surprised to discover that the dog was immediately able to walk with only a barely perceptible limp. In view of the dramatic improvement, we released the dog to the owner without supports to the leg. The dog was returned for inspection and stitch removal one week later. We have not seen the dog in the past month, but have talked to the

\*Presented at the CSVMA Convention, Los Angeles, June 11-13, 1956.

<sup>1</sup>Armistead, W. W.: Address to CSVMA, March 21, 1956.

<sup>2</sup>Armistead, W. W.: Practical Uses for Buried Skin Autografts in Dogs, Gaines Dog Research Progress—Winter, 1955-56.



owner over the telephone, and have learned that the dog is sound.

**Conclusions:** It is the opinion of the authors that Dr. W. W. Armistead has presented veterinarians with a new procedure that has limitless possibilities.

Since a skin autograft quickly establishes vascular communication with the tissues it contacts, skin may prove to be more valuable than fascia for replacement of ligaments. It is much easier to strip off a piece of skin than it is to free a strip of fascia lata as in doing the Paatsama<sup>a</sup> operation for cruciate ligament repair.

<sup>a</sup>Greene, J. E., D.V.M.: Canine Hip and Stifle Joint Injuries, *Veterinary Scope*, Upjohn Company, Volume 1, No. 4.

## Women's Auxiliary Convention Report

Statler Hotel, Los Angeles, Sunday afternoon found the ladies escorted by their favorite Doctor in attendance at the delightful cocktail party hosted by the Southern California Veterinary Medical Association. Monday morning bright and early a group of the ladies gathered at the Foxhill Golf Course for a Tournament . . . which we hope will become a yearly affair. Approximately forty women went on the bus tour and attended the Art Linkletter Show. "Our Star" of the show, Mrs. Frederick J. Walker, participated in the Message Home contest and won a very useful and coveted spice rack.

"June is Bustin' Out All Over" set the theme for a delightful ladies program at the Tuesday luncheon in the Golden State Room at the Statler Hotel. Almost 150 ladies and guests attended the luncheon and enjoyed the Louise Bockman Fashion Show. Mrs. Howard Taylor and Mrs. Don McDole were responsible for the beautifully decorated bird cages which graced each table and the live pink doves which fluttered in the king-size cages. The decorations were cleverly converted into a veterinarian's motif for the evening dinner dance.

At the business meeting after the luncheon the following officers were elected: Mrs. R. E. Duckworth, president; Mrs. Charles H. Ozanian, president elect; Mrs. Reginald A. Stocking, first vice president; Mrs. Harold Plocher, second vice president; Mrs. E. P. Bogart, membership secretary, and Mrs. Francis E. Dawson, secretary-treasurer.

The appointive officers are: Mrs. T. J. Hage, parliamentarian, and Mrs. Thomas Eville, chairman nominating committee.

Ladies who wish to join or pay dues to either National or State Auxiliary please send remittance to Mrs. E. P. Bogart, P. O. Box 758, Vista, California.

News items of local Auxiliary activities

## Message From Auxiliary President

To members of the Auxiliary to the California State Veterinary Medical Association



MRS. R. E. DUCKWORTH

I send greetings and my most sincere thanks for the honor which you have conferred upon me. As your president I shall do my utmost to discharge the duties of that office and to justify the confidence you have placed in me.

I do hope that all eligible women join the auxiliary and that by extended effort of all members we may carry on as successfully as we have in the past. As you know any organization can only be as strong as the spirit of its membership.

MIMI DUCKWORTH,

*President, Women's Auxiliary*

## IMPORTANT ANNOUNCEMENT

### To All CSVMA Members:

On June 21st, 1956, the group life insurance program went into force for the protection of many of our members' families. Approximately one million dollars worth of life insurance was placed in effect on that date for CSVMA members who had applied for this insurance.

We have made arrangements with our insurer, The Union Central Life Insurance Company to make it possible for those of you who wish to do so, to still enroll for this group life insurance without a physical examination.

This enrollment will be open to you for a limited period of time. We advise you to act quickly when you receive the opportunity to enroll by mail.

## THE 1957 MIDWINTER CONFERENCE

of the California State Veterinary Medical Association will be held at the School of Veterinary Medicine, University of California, Davis,

**JANUARY 28, 29 and 30, 1957.**

Dr. Richard L. Stowe is chairman of the Program Committee and Dr. J. F. Christensen will be co-chairman.

should be sent to Mrs. Reginald A. Stocking, 3166 Los Feliz Blvd., Los Angeles 39, California.

## Bureau of Livestock Disease Control

H. G. WIXOM, D.V.M.

### Animal Health Certificates for Interstate and Foreign Shipments

The question of how to properly prepare official health certificates for animals moving interstate or to foreign countries is frequently asked of the Bureau of Livestock Disease Control. The answer is at the same time obvious and confusing. It is obvious in that the certificate must show that the animals represented comply with the requirements of the state or county of destination. It is confusing because, as every veterinarian knows, the requirements of each state or country will differ from any other state or country.

This means that every accredited veterinarian must have a ready reference to the requirements of the various states. We know of no better reference than the U. S. Livestock Sanitary Association's Circular No. 1, Health Requirements Governing Admission of Livestock. Both the general requirements listed in the front of the circular and the specific requirements and deviations for each state should be studied before a certificate is issued.

The shipment of animals to foreign countries is still more complex and confusing since there is no compilation of requirements similar to the one referred to above for the states. Veterinarians practicing in larger metropolitan areas can often learn the requirements of a country by contacting the local Consulate office of the country of destination. The office of the Animal Disease Eradication Branch, U. S. Department of Agriculture, P. O. Box 1086, Sacramento 5, is able to furnish information on the requirements covering livestock going to certain foreign countries.

Certificates on animals going to most foreign countries as well as to Hawaii and Alaska are required to be approved by the federal office referred to in the preceding paragraph. In this case, all four copies of the official health certificate, D.A.I. Form 10, should be submitted for approval before shipment is made.

On animals moving interstate, two copies of the official certificate, the duplicate and triplicate, should be sent to the office of the Bureau of Livestock Disease Control, 1220 N Street, Sacramento 14, for approval. The pink original copy should be given to the owner or otherwise accompany the shipment and the quadruplicate copy should be retained by the veterinarian as a record.

The Bureau of Livestock Disease Control, after checking the certificate for compliance with the requirements of the state of destination, approves or disapproves it, as the case may be, and forwards a copy to the official of the state of destination. In the case of dogs and

## Livestock Diseases Reported

H. G. WIXOM, D.V.M.

Tabulation of Diseases Reported to the State Bureau of Livestock Disease Control during the Period January to April, inclusive, 1956.

	Jan.-April Incl. 1956		
	North	Central	South
Actinomycosis	2		
Anaplasmosis	3	6	6
Anthrax, cattle		3	
sheep		1	
Blackleg	1		4
Bluetongue			4
Bovine bacillary hemoglobinuria	4		
Chorioretic scab, cattle		1	1
Contagious ecthyma, sheep	5		
Cysticercus bovis	1	3	14
Encephalitis, bovine			1
Equine encephalomyelitis		1	
Foot rot, sheep	1		
Hog cholera	2	2	2
Infectious atrophic rhinitis		3	
Johnes' disease	2		
Leptospirosis, cattle	36	44	40
swine		2	
Listeriosis, cattle		1	
sheep	1		
Malignant edema	1	1	1
Malignant catarrhal fever	1		3
Paratyphoid, cattle	1		2
sheep		2	
swine	1		2
Rabies, bovine	3		1
Rhino-tracheitis		4	3
Swine erysipelas			2
Transmissible gastro-enteritis, swine		1	
Vibrio fetus, cattle		1	

cats the certificate is forwarded without approval or disapproval unless such a statement is specifically requested by the receiving state.

At the present time the problem of moving dogs out of certain areas of the state where rabies exists is a troublesome one. Rabies control in California is a responsibility of the state and local health departments. Many counties are currently under quarantine for rabies or are designated rabies endemic areas. To be certain of the status of their respective areas, veterinarians should check with the local health officers. If quarantines are in effect the exact provisions and the extent of the restrictions should be known. Many states re-



## A New, Expanded Group Disability Program

was approved by the Executive Committee, CSVMA, at the  
68th Annual Convention in Los Angeles.

...

Watch for announcement of the expanded Plan for yourself and family.  
Complete information will reach you in September.

...

This new plan at Group Rates will mean a tremendous saving to members, as compared with individual policies, besides enabling the member to blanket in himself and his dependents without evidence of insurability, provided the necessary enrollment requirements are attained during the initial enrollment period. Details of this greatly expanded program will reach you in September. It is important that you pay the regular renewal premium due August 27th in order for you to guarantee your present coverage, but full credit will be given to presently insured members when the new plan becomes effective.

### J. L. TOOLE *General Agent*, NATIONAL CASUALTY COMPANY

605 Market St.

San Francisco 5

EXbrook 2-2440

fuse to accept dogs from areas where rabies is known to exist.

Official health certificates are important and their preparation should not be taken lightly. All required information should be included and failure to do so results in the certificate being returned for more information or disapproved. The latter, of course, is an inconvenience if not an injustice to the owner involved.

To be eligible to issue official health certificates a veterinarian must hold a certificate of accreditation issued jointly by the U. S. Department of Agriculture and the State of California. Application forms for accreditation are available from the Bureau of Livestock Disease Control, 1220 N Street, Sacramento 14. Once granted, accreditation is good indefinitely or until revoked because of misuse of the privileges or responsibilities that go along with it.

Szymon Zakrzewski was graduated from Warsaw University, Poland, in 1937. He was licensed to practice veterinary medicine in California in 1950. When he became a citizen of the United States he legally changed his name to Sherman Zakrzewski Zaks. As S. Z. Zaks he occasionally contributes Foreign Reviews for THE CALIFORNIA VETERINARIAN.

### SFVC Alumni Meeting, Los Angeles

The second annual meeting of the San Francisco Veterinary College Alumni Association was held during the annual CSVMA Convention, Los Angeles. The luncheon meeting took place on June 12 at the Hotel Statler, and was attended by thirteen old grads.

Present were: Wm. C. Truckell, Nelson E. Clemens, C. E. Price, Fred C. Wright, Gerald D. Graham, Robt. J. Schermerhorn, George A. Smith, James C. McGrath, Clarence F. Kellog, Leo F. Conti, Herminio A. Bernas, Joseph M. Arburua and Raymond E. Duckworth.

Of the above, McGrath came from Arizona and Smith from Idaho to attend.

Last year's officers: Duckworth, president, and Arburua, secretary, were returned to office.

After an hour and a half of reminiscing, the "kids" adjourned, to meet again in June, 1957, in Santa Barbara, during the CSVMA meeting.

### OUT-OF-STATE NEWS

Dr. George E. Bamberger, Nevada State VMA, passed away in Reno on May 6, 1956. A graduate of the Chicago Veterinary College in 1909, Dr. Bamberger served in B.A.I. until he located in Reno and established a general practice. At his death he was the oldest veterinarian in point of service in Nevada.

# Chemical Aspects of Animal Grooming

## PART II—INSECTICIDES

ARNOLD LOWMAN, Ph.D.

Chief Chemist, Westwood Laboratories, Los Angeles, Calif.

In a previous article the factors involved in choosing a proper cleansing agent for dogs and cats were discussed. Reasons were given why properly formulated shampoos should be used rather than raw detergents.

The next important chemical problem involved in animal grooming concerns insecticides. The problem is how to destroy the insects with a minimum of risk to both the animal and the person grooming it. Unfortunately, a great many of the preparations on the market do have very appreciable toxicities, from chlordane, lindane and DDT.<sup>1</sup> The fact that the principal toxic focus of these materials is internal, where it can't be seen, combined with the fact that few dogs are defleaed oftener than once a month, has given a false sense of security to the use of these substances. Many veterinarians when approached on the subject say something to the effect that, "I've been using such and such product for five years and it hasn't killed a dog or hurt my groom yet."

Actually more important than the health of the animals is the health of the people who groom them. This aspect of the matter has been largely overlooked in spite of articles in both medical<sup>2</sup> and veterinary journals warning of the hazards of the chlorinated hydrocarbon insecticides (principally chlordane, lindane, DDT, and methoxychlor). The danger of these substances lies in three facts: (1) they are absorbed through the intact skin,<sup>3,4,5</sup> (2) their action is principally internal and largely localized in the liver,<sup>3,4</sup> and (3) the damage is cumulative<sup>6</sup> and builds up with repeated exposure. The importance of these facts becomes clear when one considers that whereas a dog may be defleaed once a month, people who wash and groom dogs will, of necessity, have their hands in insecticidal solutions and shampoos several hours a day almost every working day. Under these circumstances the total exposure is considerable and is medically unjustifiable. The author has talked with several persons, formerly in the grooming business, who have had to retire from it due to poisoning by these agents.

In many areas fleas have become resistant to the chlorinated hydrocarbons. This means that since the fleas are harder to kill with chlordane and lindane there is a tendency to use stronger solutions of them to do the job. This, of course, only makes a bad situation worse.

There are, of course, other classes of insecticides, such as the thiocyanates and organic phosphates, to which fleas have apparently not

yet developed tolerance. However, these materials too have a real toxicity to both man and dogs, as may be gathered from the caution statements which are required to be on labels of products containing them.

Fortunately, there are agents to which fleas are not resistant which are both effective and safe, principal among these is pyrethrin, which has been known for years for its extremely rapid knock-down effect. Of recent years there have been developed materials which are effective insecticides in themselves but which also greatly enhance the effectiveness of pyrethrin. One of these is piperonyl butoxide. The toxicity of both pyrethrin and piperonyl butoxide is very low. Dr. A. J. Lehman, Chief of the Bureau of Pharmacology of the U. S. Food and Drug Admin., in reporting on experimental work with pyrethrin has said,<sup>6</sup> "Highly concentrated extracts have been applied to the human skin without signs or symptoms of irritations . . . The toxicity of pyrethrin appears to be so slight in warm-blooded animals that no tissue damage has been reported as caused by these agents . . . The single acute oral dose is quite large in animals, being of the order of 1½ grams/kg." Concerning piperonyl butoxide he says, "Piperonyl butoxide is relatively inactive pharmacologically. The quantities necessary to produce poisoning are quite large, being of the order of 10½-12 grams/kg. so that the hazards for ingesting a single dose of these materials appear to be of minor importance."

Mixtures of pyrethrin and piperonyl butoxide are the only insecticides which may be used in the milking rooms of dairies or for spraying grain in storage. Materials as safe as this certainly recommend themselves for use in small animal work, not only for the safety of the animals, but even more important (because of frequency of contact) for the safety of the people using them. When safe and effective materials can be had, what justification can one have for using agents which are known to be real health hazards?

### Bibliography

<sup>1</sup> Lehman, A. J., Chemicals in Foods—Part II, Section III: "Subacute and Chronic Toxicities," *Ass. Food Drug Off. U. S. 16*, 47 (1952).

<sup>2</sup> Lemmon, G. B., and Pierce, W. F., "Intoxication due to Chlordane," *Jour. Amer. Med. Assoc.* 149, 1314 (1952).

<sup>3</sup> Toxic Effects of Tech. Benzene Hexachloride. Comm. on Pesticides, *Jour. Amer. Med. Assoc.* 147, 571 (1951).

<sup>4</sup> Recent Insecticides: Entomological and Pharmacological Aspects, *Stanford Med. Bull.* 8, 112 (1950).

<sup>5</sup> Lehman, A. J., Chemicals in Foods—Part II, Section II, "Pesticides: Dermal Toxicity," *Ass. Food Drug Off. U. S. 16*, 3 (1952).

<sup>6</sup> "Pharmacologic Aspects of DDT," Comm. on Pesticides, *Jour. Amer. Med. Assoc.* 145, 728 (1951).



# FIVE SPECIAL FORMULAE

## Prescription Diets

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THERAPY IS INDICATED

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## Edwin James Hoff Joins Schering

Edwin James Hoff, D.V.M., has been appointed to the Veterinary Medicine Department staff of Schering Corporation, Bloomfield, New Jersey, pharmaceutical manufacturers, according to an announcement by Robert E. Waterman, vice-president of the company. The Veterinary Medicine Department is under the direction of J. C. Siegrist, D.V.M.

Dr. Hoff was employed by the New York State Veterinary College Regional Laboratory in Kingston, New York, prior to joining Schering.

He served with the United States Army Signal and Air Corps for six years, including four years' service during World War II. Following his release from the Army, Dr. Hoff took two years of pre-medical training at Cornell University. After completing his preliminary training, he attended New York State Veterinary College from which he received a Doctor of Veterinary Medicine degree in 1952.

## Research on Anaplasmosis

Research to find the agent that causes anaplasmosis, a costly infectious anemic disease in cattle, will continue at an Oklahoma A & M College field laboratory under a \$5,000 grant from the American Cyanamid Company. The disease, which is spreading over the U. S., now causes annual losses of more than 9½ million dollars.

Dr. L. E. Hawkins, Agricultural Experiment station director, said work is under way at the Animal Disease Research station in Pawhuska. This is the third year that American Cyanamid Company has supported the program with annual grants.

Research men will attempt to grow the disease-causing organism in test tubes in the hope that eventually a vaccine can be developed that will cut down the 50 to 75 per cent death rate among infected adult cattle.

## Gadgets, Ideas Wanted

Dr. J. Bradley Crundwell, 704 Roselli, Burbank, makes the following request: "I have been asked to arrange a television demonstration on 'Gadgets and Clinical Procedures' to be presented at the AVMA meeting in San Antonio in October.

"Do you have any gadgets, appliances, short-cut clinical procedures or surgical 'quickies' which you have found successful in your practice that other practitioners could profitably apply? I shall appreciate any suggestions which you might care to offer. Please send me any ideas you may have, to the address above."

## Veterinary Drugs and the Board of Pharmacy

(Continued from page 29)

spects with the same drug designed for human consumption, we also recognize the fact that they should not be so used except under the direction of a physician. Some manufacturers have seen fit to indicate the purity and strength of their product by comparing it with products intended for human consumption. Such advertising cannot be limited to professional users alone and it is felt that the practice of using such advertising should be discouraged. Perhaps a resolution from your convention, directed to the manufacturers, would be of assistance in this regard.

While exploring the field of drugs defined in our statutes as dangerous drugs, used in the treatment of animals and poultry, the use of antibiotics as growth stimulants and food supplements has come to my attention. Certain hormones have been successfully used to stimulate the growth of beef animals and poultry; however, the action of antibiotic drugs for this purpose has never been satisfactorily explained. Antibiotics most certainly do not come within the classification of a hormone, nor has their direct value as growth stimulants ever been established. Federal law permits their use, within certain limits, as poultry food additives, even though our state law does not exempt these products for this purpose. Even though their action as a growth stimulant has never been determined, they apparently have some value, whether it be direct or indirect. If so, a statutory exemption should be enacted to provide for compliance with the federal law when animal feeds containing these drugs are sold to the consumer.

The definition of the word "Drug," as it appears in the Pharmacy Law, includes all articles used for the diagnosis, cure, treatment, mitigation or prevention of disease in man or other animal. Those veterinary drugs which are designated as being dangerous drugs will be restricted to prescription only, except when administered by a doctor of veterinary medicine. The Attorney General has held that all drugs bearing the federal caution legend are dangerous drugs, regardless of the purpose for which they are designed or intended, or the labeling which they contain. As such, dangerous drugs intended for veterinary use will be restricted to sale on prescription, even though they do bear adequate directions for use, as required by the federal law.

The same restriction will apply to such other drugs as our own board determines should be so restricted. The power to make rules and regulations to provide such restrictions is provided by Section 4240 of the Business and Professions Code. That section gives our board the right, after conducting open hearings, to restrict those products, which in their opinion may prove detrimental to public health, to

sales in pharmacies, by pharmacists, or on prescription.

A formal opinion was requested from the Attorney General on March 2, 1956, and although the opinion has not been formally approved, I will discuss the questions which were presented to the Attorney General and my understanding of the answers which will be included in the opinion when formally rendered.

**Q.1**—Can any veterinary product, other than those exempted, (e), (f), (h) and (i) of 4211, be dispensed except on the prescription of a Doctor of Veterinary Medicine?

**A.1**—Dangerous drugs, other than those specifically exempted as provided in Section 4211, subdivisions (e), (f), (h) and (i), may be dispensed only on prescription of a Doctor of Veterinary Medicine.

**Q.2**—If the answer to No. 1 is "no," would the filling of such prescriptions be limited to licensed pharmacies only?

**A.2**—The prescription of any medical practitioner may only be filled in a pharmacy licensed by the State Board of Pharmacy.

**Q.3**—May products exempted in Subsections (e), (f), (h) and (i), even though properly labeled "For Veterinary Use," be sold by anyone except a pharmacist?

**A.3**—The drugs exempted under Subsections (e), (f), (h) and (i) designed, intended and labeled "For Veterinary Use Only," will be exempted from the prescription requirement. It is felt, however, that any drugs covered by these subsections which are covered by the definition of the word "drug" as it appears in Section 4031 may be restricted to sale by registered pharmacists only.

**Q.4**—If the definition of prescription is considered and the fact that prescription files must be maintained, does this prohibit any person, other than a licensed pharmacist, from filling such prescriptions?

**A.4**—No person other than a registered pharmacist may fill a prescription.

**Q.5**—Is the practice of relabeling products intended for human use, to provide "For Veterinary Use Only," a legal practice by pharmacists?

**A.5**—The relabeling of any product defined in Section 4211 as a dangerous drug to bear the label "For Veterinary Use Only," results only in the misbranding of said drug and does not bring the drug under the exemptions provided in Section 4211.

**Q.6**—Would the sale of products labeled, "For Veterinary Use Only," be limited to products which are so labeled according to federal law? I refer to those products which federal law requires to bear the label, "Caution—Federal law restricts the sale of this drug by or on the order of a licensed veterinarian." It is my understanding that all products which are listed in Section 4211 of the Business and Professions Code as dangerous drugs in California do not bear the federal legend when designed for veterinary use only, nor does the legend for human use correspond to those which bear the caution label, "For Veterinary Use Only."

**A.6**—Any dangerous drug named or included in the provisions of Section 4211, except those specifically exempted for veterinary use, may be dispensed only on the prescription of a Doctor of Veterinary Medicine.

In a previous memo opinion, the Attorney General made specific findings in reference to manufacturers and wholesalers of veterinary products. I quote from that opinion: "We find no exemption from licensure for manufac-



turers of drugs used for veterinary purposes. The legislature has recognized the danger of drugs used on both man and animal, manufacturers of veterinary drugs must likewise be licensed. Had the legislature intended that the manufacture of veterinary drugs be exempted from licensure under the statute it would have so provided." In reference to wholesalers, the opinion says: "All distributors who sell and distribute for resale the products of manufacturers come within the classification of a wholesaler and must be licensed as provided by section 4084. Distributors selling or distributing articles exempted in sections 4052 and 4057 do not come within the definition of a wholesaler." The only reference to veterinary products is in section 4057, which refers to vitamin and mineral preparations, dietary foods, food supplements, etc., when sold to supplement the diet of man or animal. All manufacturers and wholesalers of veterinary drugs are required to be licensed.

Another problem with which we are concerned is the sale of hypodermic syringes and needles by non-licensees. In the past, hypodermics, when sold for veterinary use, were considered exempt. This is not true. No person, except a licensee of our board, may sell a hypodermic for any purpose. Licensees may only sell these articles under certain conditions. Sales for human use are limited to prescription only, unless the purchaser is suffering from asthma or diabetes. Sales to persons licensed to practice in the healing arts are specifically exempted by our law. Except as otherwise specifically exempted, no syringe or needle may be sold except when registered as required by law and such sales may only be made by persons holding currently valid hypodermic sales permits.

I will now review the Attorney General's opinion in reference to the sale of hypodermics at this time. Following are the questions presented and the answers given in opinion 56/49 dated March 22, 1956:

Q.1—Is the board limited as to whom it may issue a hypodermic permit?

A.1—The board is not limited as to whom it may issue hypodermic permits.

Q.2—Is there any exemption whereby sales may be made without registration, as provided in section 4141, other than to the persons specified in section 4142?

A.2—There are no exemptions whereby sales may be made without registration as provided in section 4141 other than those exempted in section 4142. (4142 permits sales, without registration, when made to pharmacies, physicians, dentists, chiropodists, veterinarians, other jobbers and wholesalers, funeral directors and embalmers and other permittees—nurses and licensed medical technicians and technologists.)

Q.3—Must drug jobbers, drug wholesalers or manufacturers or manufacturers and dealers in surgical instruments, as set forth in section 4142, have a hypodermic permit to sell at wholesale to persons listed? (Subsection (g) implies this, but it is not so stated in the law.)

A.3—Drug jobbers, drug wholesalers or manufacturers, or manufacturers and dealers in surgical instruments, when selling at wholesale to those persons

designated in section 4142 are not required to have a hypodermic permit. Wholesale sales made to persons other than those designated in section 4142 require the seller to obtain a hypodermic permit.

Q.4—If a separate hypodermic permit is not required, by the persons listed in Q.3, to sell at wholesale, is it required that they be licensed as drug wholesalers or manufacturers in order to sell hypodermics?

A.4—The exemption provided in section 4142 does not exempt drug wholesalers or drug manufacturers from requiring a license as provided by section 4084.

Q.5—Section 4143 makes possession unlawful unless the syringe or needle was obtained as provided in the code. Would this require the "person engaged in the breeding or raising of livestock, poultry, or other animals," as provided in subsection (c), obtain hypodermics as provided by law?

A.5—Persons engaged in the breeding or raising of livestock, poultry or other animals may possess hypodermics. They are not, however, exempt from the provisions of section 4141 requiring the purchase to be made from persons to whom a permit has been issued by the board and the registration of such hypodermics in a registration book.

Q.6—Section 4145 covers sales for human use on prescription, but exempts such sales to persons suffering from asthma or diabetes. What degree of proof would be necessary before a pharmacist would be justified in making a sale to a person who claims to be asthmatic or diabetic?

A.6—There is no standard of proof which justifies a pharmacist selling hypodermics to persons suffering from diabetes or asthma. The pharmacist, with his professional learning and experience, should exercise the highest degree of care and good faith in selling hypodermics without a prescription to persons claiming they suffer from diabetes or asthma.

Q.7—All pharmacies in California are licensed to sell hypodermics as provided by law. May anyone else sell a hypodermic unless they are licensed by this board and record all sales as provided in section 4141 (except as provided in 4142)?

A.7—Only persons who have been issued a permit by the board may sell hypodermics and all such persons shall record such sales at the time the sale is made.

This may come as a complete surprise to many dealers in animal feeds and veterinary remedies, and others who are selling hypodermics. It is not a new law, the law has not been changed. It is based on the interpretation of the existing law by the Attorney General. Here again the need for proper interpretation and enforcement of the law has been based on increasing evidence of misuse of hypodermics obtained from such sources.

Now that we have formal opinions which interpret the laws, as they can be applied to the sale of dangerous drugs for veterinary purposes and hypodermics, an enforcement program will be instigated to correct existing infractions. Any cooperation the members of your profession can give us in overcoming these conditions will be appreciated. You can assist us by sending us information on known violators, anonymous or otherwise, or through your own association secretary to be forwarded to our office. We presently have only 12 inspectors and it will be far less difficult to cover the entire state if we know where to look for violations.

Before concluding my remarks, I would like to speak briefly about hypnotic drugs used in



veterinary medicine and the hypnotic license required for their purchase. I have had many letters from members of your profession since the raise in the hypnotic license fee. Many imply that I am personally obtaining the benefits of the increased fee and others imply that it has been necessary for them to save their money in order to pay the fee. I assure you that the fee, as set by the legislature, was based on good, sound facts. If the expense involved in investigating violations concerning hypnotics alone were to be raised solely from this license, the fee would be considerably more than the \$10.00 now charged.

Contrary to general belief, there is nothing in the dangerous drug law which provides for the purchase of hypnotic drugs by any person except by use of the triplicate hypnotic order form, or on prescription. This requirement also applies to hypnotic drugs designed, intended and labeled for veterinary use. Triplicate order forms are only available to persons holding a currently valid hypnotic license. Wholesalers or manufacturers may not sell hypnotic drugs except on receipt of a properly executed hypnotic order form and pharmacies may only dispense such drugs on prescriptions from licensed practitioners, or on receipt of an order form.

Section 4226 of the Business and Professions Code (formerly section 29015.1 of the Health and Safety Code) reads as follows: "This article does not require a license from and shall not apply to or interfere with a physician, dentist, chiroprapist or veterinarian in administering hypnotic drugs to his own patients. Such hypnotics shall be administered only by the physician, dentist, chiroprapist or veterinarian."

The word "administer" is defined in section 4213 (formerly 29003.5 of the Health and Safety Code) as follows: "Administer as used in this article, means the furnishing by a physician and surgeon, dentist or chiroprapist to his patients of such amounts of drugs or medicines referred to in this article as are necessary for the *immediate needs of the patient*." This section provides for immediate treatment only.

I don't know whether you noticed it or not, but the word "Veterinarian" was not included in the last section referred to (4213). I know of no reason for its omission, except that the author of the bill may have been confused by the term "Patient." I see no reason why it should not be included, particularly as it is covered in the exemption provided by section 4226.

Although the law provides an exemption for those who administer hypnotics to their patients, it makes no provision for the purchase of such drugs by the practitioners mentioned. Sales at wholesale, or by a manufacturer, require the triplicate order form and the practitioner must be licensed to obtain that form.

On recognizing this condition, our board adopted a provision whereby a practitioner could obtain a supply of drugs for administering to the immediate needs of his patients. Pharmacies are authorized to sell licensed practitioners hypnotic drugs, in quantities not to exceed 100 doses, on receipt of an order written as a prescription. This prescription order must be clearly marked: "For Office Use," or "For Administering to Patients," and bear all other information required by law. This order is considered a prescription and must be maintained on the prescription file of the pharmacy as required by law.

At the time this provision was made, only hypnotics for human use were considered. The maximum of 100 doses was based on human dosage. The same provision would apply to veterinary products. If you are administering only, as previously defined, and are supplying drugs only for immediate use, you would be entitled to purchase in the manner set forth above. If, however, you intend to purchase from a wholesaler or manufacturer, or if you intend to dispense these drugs, you are required to purchase a hypnotic license and use the triplicate order forms.

"Dispense" as defined in section 4214 means: "The furnishing of the medicine referred to in this article upon a legal prescription, or upon a legal order form." If you furnish a supply of any such medication for your patients, you are dispensing. This is a perfectly legal right if you have purchased the drugs on a legal form and maintain the required records. Otherwise you may write prescriptions for hypnotic drugs to be used by your patient and these may be filled by your pharmacist. The law provides that a record of the hypnotic drugs administered by any person exempt shall be kept, stating the date, name and address of the patient, name and amount of the drug administered.

With a better understanding of the problems with which we are confronted in regulating sales of dangerous drugs, I hope that Pharmacy can depend on the support of your profession when the legislature is presented with amendments to provide better control and to overcome illegal practices. As far as I presently know, many suggested changes will be presented for consideration at the next regular session of the legislature.

I have heard considerable comment which indicates to me that relations between members of our professions may not be what they should be. May I suggest that you become better acquainted with your pharmacist. I feel certain that you will find him more than willing to cooperate with you in any way possible for the betterment of our respective professions. Our mutual responsibility, like that of all other members of the healing arts team, is the protection of public health.

# OPPORTUNITIES

## For Lease

Large Animal portion of veterinary practice for lease. Central coast county. Box A-41, THE CALIFORNIA VETERINARIAN.

\* \* \*

During August and September or longer, animal practice in resort city (Monterey Bay area). Living quarters equipped with swimming pool and steam bath. Write P. O. Box 2413, Carmel.

\* \* \*

Growing business—grosses \$1,000 per month. \$6,000, terms, buys equipment, supplies, drugs. 16 kennels, 6 outside runs. Room for more kennels. No real estate for sale. Property can be leased for 7 years, \$100 per month. In S. F. Bay Area. Write Box A-42, THE CALIFORNIA VETERINARIAN.

\* \* \*

For sale or lease with option to buy—3,000 sq. ft. cement block building. 4-car garage, 3 other buildings 320 sq. ft. each. Apartment, 2 large rooms and bath for caretaker. Cyclone fence, 150 ft. frontage, 115 ft. deep. Ideal for Veterinary Hospital. Would remodel for tenant. C. H. Acheson, 7373 Mohawk Street, La Mesa, Calif. Phone Hopkins 6-5224.

\* \* \*

Small animal hospital, 38-cage capacity, for sale or lease in southern Bay Area city in California. Hospital completely equipped and one-man practice well established. Address inquiries to Box A-45, THE CALIFORNIA VETERINARIAN.

\* \* \*

## For Rent or Lease

Long-established pet hospital in best location of Long Beach. Not fancy, but is equipped, open and doing business. Ideal for man with experience but not rich, as no money is required. Buy or supply the medicines and take over. Rent includes newly-redecorated apartment upstairs. Short or long term lease. Write or call Dr. Melvin J. Marcus, at 3198 Orange, Long Beach 7. GARfield 4-8976.

\* \* \*

## For Sale

California Small Animal Hospital in select area, drawing clientele from Hollywood and Beverly Hills. Modern buildings and real estate, including living quarters. Completely equipped; X-ray, instruments, refrig., grooming, etc. 100 animal capacity, 30 outside runs. \$15,000 down. Terms. Owner retiring. Write Box A-38, THE CALIFORNIA VETERINARIAN.

\* \* \*

Fischer Portable X-ray, 90 K. V. at 20 milliamperes. Ideal for D.V.M. May be inspected at 212 D Street, Davis, Calif. Write Joseph A. Pence, D.D.S., for appt. Price, \$300.

## Veterinarian Wanted

Full-time veterinarian for small animal hospital in Stockton. Living quarters on premises. Write Box A43, THE CALIFORNIA VETERINARIAN.

\* \* \*

## Veterinarian—Public Health

To assist in planning, initiation, and development of state and local health department programs involving control of animal diseases. Need California license or must receive it within a year plus three years' medical veterinary experience in Public Health agency or research. One year graduate study in Public Health may be substituted for two years' experience.

Apply before August 17, California State Personnel, 515 Van Ness Ave., San Francisco.

\* \* \*

## Position Wanted

Graduate veterinarian, with 2 years' experience in small animal hospital desires position in southern California, leading to partnership or lease. Licensed in California. Married; draft exempt. Write, Box A-44, THE CALIFORNIA VETERINARIAN.

## LOCAL ASSOCIATION NEWS

The East Bay VMA was addressed by Dr. Wendell C. Peart, chairman of the CSVMA Veterinary Supply Committee, at their May 29th meeting.

\* \* \*

Northern San Joaquin Valley VMA held a joint meeting with their wives at the home of Dr. and Mrs. Robert Beck, Modesto, May 23. Pictures of a burro trip to the High Sierra were shown by Mr. and Mrs. Webber.

\* \* \*

Kern County VMA elected the following officers: president, Dr. Albert Batista; vice-president, Dr. Richard Stiern; program chairman, Dr. Charles Burger, and secretary-treasurer, Dr. A. L. Irwin, 301 Taft Highway, Bakersfield.

\* \* \*

Central California VMA elected the following officers: president, Dr. I. C. McDonald; vice-president, Dr. H. M. Atkinson; secretary-treasurer, Dr. R. B. Barsaleau, 2333 E. Mineral King, Visalia.

On July 19, 1956, Governor Goodwin J. Knight appointed Dr. Philip L. McClave, Reseda, as a member of the Board of Examiners in Veterinary Medicine to succeed Dr. Eugene C. Jones, term expired, for a term ending January 15, 1960.

## Applicants

R. Nichol Smith, Los Angeles. Vouchers: George E. McClintock, Martin H. Harvey.

Robert Y. Foos, Victorville. Vouchers: William J. Zontine, Royal E. Klofanda.

Harold F. Meyers, Newman. Vouchers: R. B. Meyers, L. D. Meyers.

Floyd M. Ziegler, Oakland. Vouchers: Russell P. Cope, Leo S. Goldston.

William C. Jamison, Los Angeles. Vouchers: Thomas H. Calvin, Robert J. Streeter.

Richard H. West, Clovis. Vouchers: Kenneth L. Johnson, Wilfred Pimentel.

## Golf Winners

The following are the winners of the CSVMA golf tournament held June 11 at the Fox Hills Golf Course:

Members: Joe L. Geierman, Low Gross (82); D. W. Rosenberg, Low Net (88-17—71 net).

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## We Believe . . .

that we have the most complete Hair Clipper Service on the Pacific Coast. Some of the most modern Veterinary Hospitals have been our customers for many years, and we are proud of the quality of the Clipper Repair work and Blade Grinding we have done for them. We have Clippers and Blades in stock for immediate shipment. Your old Clipper has top trade-in value here.

### BLADE GRINDING \$1.00 PER SET

Prices of Clipper Repairs are based on parts and labor required. If you wish, we will notify you of the charges before we do the work. We pay return postage and insurance on all orders, and all work is guaranteed.

Send your Clipper and Blade Troubles to us—You will be glad you did

## ELlichman's Clipper Service

385 N. Blackstone Ave.

Fresno 1, California

Formerly Located in Oakland, Calif.



## The modern all-purpose local anesthetic



HEXYLCAINE HYDROCHLORIDE

'CYCLAINE' is fast-acting, long-lasting, relatively nontoxic; has a wide safety margin — provides sensory anesthesia with little or no motor nerve effect.

Available in 2 concentrations: 1% (infiltration; nerve block; epidural anesthesia in dogs) supplied in 100-cc. rubber-capped bottles. 5% (epidural anesthesia in large animals; topical anesthesia) in 20-cc. rubber-capped vials.



**MERCK SHARP & DOHME**

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VETERINARY DEPARTMENT, U. S. VETERINARY LICENSE NO. 3.

## California Veterinarians . . .

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these  
**6 WAYS** →  
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3004 16th St., San Francisco, Calif.

**\$200 per month for Accident...**

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**\$1000 Accidental Death . . . \$10,000 Dismemberment**

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**PLUS** Hospital Residence Expense, \$8 per day up to 70 days—Miscellaneous Hospital Expense up to \$100—Surgical Operation Expense, \$7.50 to \$225.

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An additional \$100 per month may be available to you. Write for details.

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**(See Page 46)**



# OPPORTUNITIES

## For Lease

Large Animal portion of veterinary practice for lease. Central coast county. Box A-41, THE CALIFORNIA VETERINARIAN.

\* \* \*

During August and September or longer, animal practice in resort city (Monterey Bay area). Living quarters equipped with swimming pool and steam bath. Write P. O. Box 2413, Carmel.

\* \* \*

Growing business—grosses \$1,000 per month. \$6,000, terms, buys equipment, supplies, drugs. 16 kennels, 6 outside runs. Room for more kennels. No real estate for sale. Property can be leased for 7 years, \$100 per month. In S. F. Bay Area. Write Box A-42, THE CALIFORNIA VETERINARIAN.

\* \* \*

For sale or lease with option to buy—3,000 sq. ft. cement block building. 4-car garage, 3 other buildings 320 sq. ft. each. Apartment, 2 large rooms and bath for caretaker. Cyclone fence, 150 ft. frontage, 115 ft. deep. Ideal for Veterinary Hospital. Would remodel for tenant. C. H. Acheson, 7373 Mohawk Street, La Mesa, Calif. Phone HOplins 6-5224.

\* \* \*

Small animal hospital, 38-cage capacity, for sale or lease in southern Bay Area city in California. Hospital completely equipped and one-man practice well established. Address inquiries to Box A-45, THE CALIFORNIA VETERINARIAN.

\* \* \*

## For Rent or Lease

Long-established pet hospital in best location of Long Beach. Not fancy, but is equipped, open and doing business. Ideal for man with experience but not rich, as no money is required. Buy or supply the medicines and take over. Rent includes newly-redecorated apartment upstairs. Short or long term lease. Write or call Dr. Melvin J. Marcus, at 3198 Orange, Long Beach 7. GARfield 4-8976.

\* \* \*

## For Sale

California Small Animal Hospital in select area, drawing clientele from Hollywood and Beverly Hills. Modern buildings and real estate, including living quarters. Completely equipped; X-ray, instruments, refriger., grooming, etc. 100 animal capacity, 30 outside runs. \$15,000 down. Terms. Owner retiring. Write Box A-38, THE CALIFORNIA VETERINARIAN.

\* \* \*

Fischer Portable X-ray, 90 K. V. at 20 milliamperes. Ideal for D.V.M. May be inspected at 212 D Street, Davis, Calif. Write Joseph A. Pence, D.D.S., for appt. Price, \$300.

## Veterinarian Wanted

Full-time veterinarian for small animal hospital in Stockton. Living quarters on premises. Write Box A43, THE CALIFORNIA VETERINARIAN.

\* \* \*

## Veterinarian—Public Health

To assist in planning, initiation, and development of state and local health department programs involving control of animal diseases. Need California license or must receive it within a year plus three years' medical veterinary experience in Public Health agency or research. One year graduate study in Public Health may be substituted for two years' experience.

Apply before August 17, California State Personnel, 515 Van Ness Ave., San Francisco.

\* \* \*

## Position Wanted

Graduate veterinarian, with 2 years' experience in small animal hospital desires position in southern California, leading to partnership or lease. Licensed in California. Married; draft exempt. Write, Box A-44, THE CALIFORNIA VETERINARIAN.

## LOCAL ASSOCIATION NEWS

The East Bay VMA was addressed by Dr. Wendell C. Peart, chairman of the CSVMA Veterinary Supply Committee, at their May 29th meeting.

\* \* \*

Northern San Joaquin Valley VMA held a joint meeting with their wives at the home of Dr. and Mrs. Robert Beck, Modesto, May 23. Pictures of a burro trip to the High Sierra were shown by Mr. and Mrs. Webber.

\* \* \*

Kern County VMA elected the following officers: president, Dr. Albert Batista; vice-president, Dr. Richard Stiern; program chairman, Dr. Charles Burger, and secretary-treasurer, Dr. A. L. Irwin, 301 Taft Highway, Bakersfield.

\* \* \*

Central California VMA elected the following officers: president, Dr. I. C. McDonald; vice-president, Dr. H. M. Atkinson; secretary-treasurer, Dr. R. B. Barsaleau, 2333 E. Mineral King, Visalia.

On July 19, 1956, Governor Goodwin J. Knight appointed Dr. Philip L. McClave, Reseda, as a member of the Board of Examiners in Veterinary Medicine to succeed Dr. Eugene C. Jones, term expired, for a term ending January 15, 1960.

## Applicants

R. Nichol Smith, Los Angeles. Vouchers: George E. McClintock, Martin H. Harvey.

Robert Y. Foos, Victorville. Vouchers: William J. Zontine, Royal E. Klofanda.

Harold F. Meyers, Newman. Vouchers: R. B. Meyers, L. D. Meyers.

Floyd M. Ziegler, Oakland. Vouchers: Russell P. Cope, Leo S. Goldston.

William C. Jamison, Los Angeles. Vouchers: Thomas H. Calvin, Robert J. Streeter.

Richard H. West, Clovis. Vouchers: Kenneth L. Johnson, Wilfred Pimentel.

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**(See Page 46)**

*We Thank You,*  
**VETERINARIANS!**



A—HORSE MEAT, BEEF  
BY-PRODUCTS

AND GROUND  
FRESH BONE.  
B—CRACKED  
BARLEY.

C—SOYABEAN MEAL.  
D—WHEAT GERM.  
E—CARROTS.  
F—SALT.  
G—VITAMIN OILS.

This kit shows the actual CALO formula for dogs. Please note the preponderance of fresh meats! CALO CAT FOOD has fresh fish and catnip added. CALO is cooked to a rich, golden brown in natural, meat-flavored juices. No artificial colorings, flavorings or preservatives are added. CALO does not manufacture pet remedies. CALO packs dog, cat and puppy food you can safely recommend. Special literature is available upon request.

Not many folks can understand  
What makes a pooch feel bad,  
Or what is wrong with kitty-cat  
If she is looking sad  
—but YOU do!

Not many folks will take the time,  
When you have done your share,  
To thank you 'cause you've done  
your best  
To thank you 'cause you care  
—but we do!

We are grateful, too, to CALO,  
So famous for its meats!  
Cooked to a luscious, golden brown,  
Just what a good pet needs.



# **CALO Dog Food Co., Inc.**

**CALO Dog Food • CALO Cat Food • CALO Puppy Food**

1530 E. 12th St., Oakland 6, California • Factories: Oakland, California • West Hanover  
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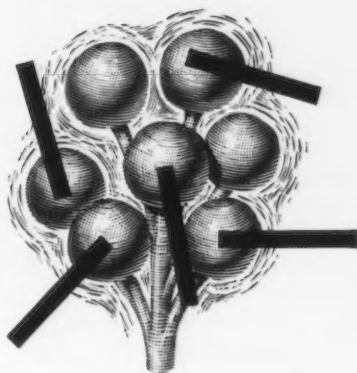


The **FIRST** effective treatment against **BOTH**  
the **inflammation** and **infection** of mastitis

...**CORBIOT**\*

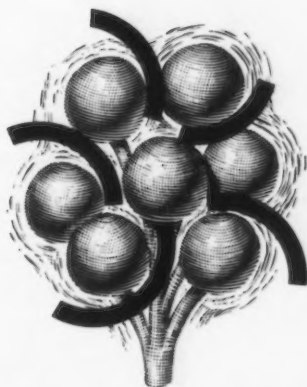
against the **infection**

*potent antibiotic combination,  
with the synergistic and  
additive actions of NEOMYCIN,  
PENICILLIN, and POLYMYXIN  
to attack Gram-negative  
and Gram-positive organisms  
infecting the udder.*



against the **inflammation**

*for the first time, potent  
anti-inflammatory action of  
CORTEF\* (hydrocortisone  
acetate) to reduce swelling,  
minimize scarring, and help  
maintain milking volume.*



**Teatube\*-CORBIOT\***

*Available in single-dose, 10 gram, collapsible, applicator Teatube. Packed singly and in dozens. Each tube contains 20 mg. hydrocortisone acetate (CORTEF), 250 mg. neomycin sulfate (equiv. to 175 mg. base), 250,000 units procaine penicillin G, 50,000 units polymyxin B sulfate, and 50 mg. chlorobutanol in a special, milk-miscible base.*

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**Upjohn**

The Upjohn Company, Kalamazoo, Michigan

\*TRADEMARK, REG. U. S. PAT. OFF.

JULY-AUGUST, 1956

# Alosera\*

Anti-Canine Distemper Serum and Anti-Infectious  
Canine Hepatitis Serum



**gives  
double +  
protection**

Alosera is Lockhart's Anti-Canine Distemper Serum and Anti-Infectious Canine Hepatitis Serum. Capable of counteracting the viruses of both canine distemper and infectious canine hepatitis, Alosera also contains the plus feature of bacterial antibodies which aid in controlling secondary infections.

A sterile Berkefeld filtered serum, Alosera is prepared from the blood of dogs hyperimmunized against the viruses of canine distemper and infectious canine hepatitis, and given repeated injections of antigens of *Salmonella typhimurium* and *cholerae*, *Brucella bronchiseptica* and *Streptococcus cerebitis canis*.



Alosera is pasteurized for greater safety. It is available only to graduate veterinarians.

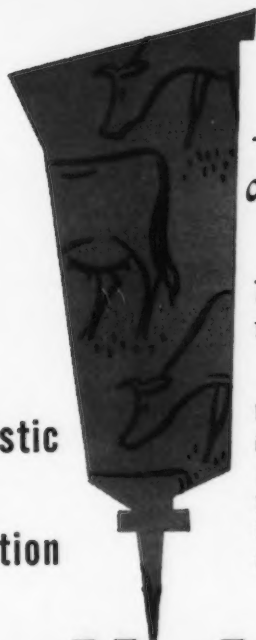
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**ASHE LOCKHART, INC.**

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**A synergistic  
antibiotic  
combination**



*For mastitis  
and topical application*

**7.5 cc. tube contains:**

Neomycin sulfate . . . . . 100 mg.  
(equivalent to 60 mg. standard  
neomycin base)

Polymyxin B sulfate . . . 100,000 Units  
in a free-flowing milk miscible base.

100 cc. multi-dose vials, each 10 cc. contains:  
Neomycin sulfate . . . . . 100 mg.  
Polymyxin B sulfate . . . 100,000 Units  
in a free-flowing milk miscible base

# Daribiotic\*

Neomycin—Polymyxin B, Massengill

*For intestinal and  
uterine infections*

**Each green oblong tablet contains:**

Neomycin sulfate. . . . . 25 mg.  
(equivalent to 15 mg. standard  
neomycin base)

Polymyxin B sulfate . . . . . 25,000 Units  
conveniently packaged for dispensing in plio-  
film strips.

Twenty-four individually sealed tablets per  
carton.



**THE S. E. MASSENGILL COMPANY**  
**VETERINARY DIVISION**

Bristol, Tennessee

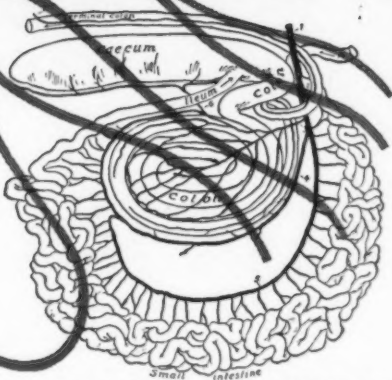
Kansas City • San Francisco • New York

\*U.S. Pat. 2,565,057



a smooth muscle  
antispasmodic and analgesic  
acting through the central nervous system

# novin



*Illustrations from ANATOMY OF THE DOMESTIC ANIMALS;  
by Sisson and Grossman; W. B. Sanders Co.*

Novin is a rapid acting antispasmodic and analgesic, which works directly on the central nervous system. It is indicated to relax smooth muscle spasm in cases of colic due to **intestinal impaction, bloat, and esophageal obstruction**. In equine colic, the analgesia produced allows the patient to rest, and prevents injury from violent movements that are so common. This also facilitates examination and treatment of the animal.

In small animals, Novin is used to relieve pain of **arthritis, spondylitis, myositis of fractures, and prostatitis**.

**HAVER-GLOVER**  
*Laboratories*  
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**ADMINISTRATION:** Novin assures the same dependable results whether given intravenously, intramuscularly, or subcutaneously.



# Adrenomone

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**ACB<sub>12</sub>**  
**DYNAMONE**  
**ADRENOCILLIN**  
**D-40**

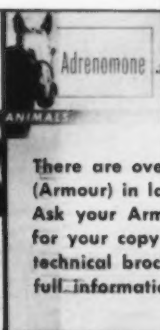
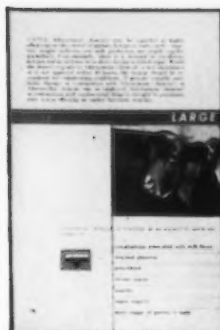
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also contain  
**ACTH**



The therapeutic significance of ADRENOMONE (Armour) derives from the fact that the adrenocortical hormones are vital factors in the animal's ability to withstand and overcome stress.

When used properly in the recommended doses, ADRENOMONE (Armour) is a safe drug in animals. It is not disease-specific, as are the antibiotics, nor is treatment aimed at any particular organ, as is digitalis.

By stimulation of the adrenal cortex to secrete its entire spectrum of hormones, ADRENOMONE (Armour) acts to restore the physiological balance of the body by maintaining cellular integrity.



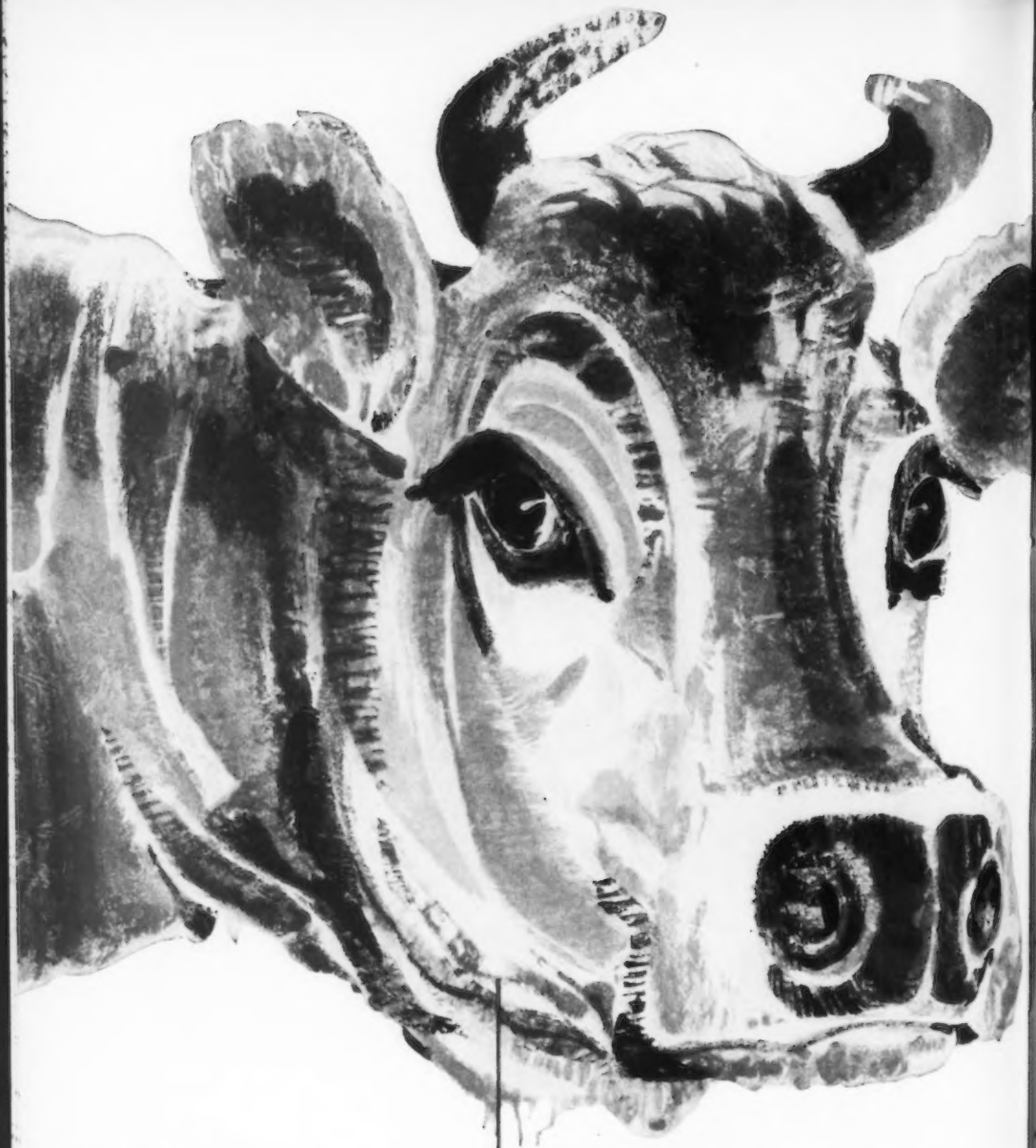
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**POLYOTIC INTRAMUSCULAR:**

100 mg.-500 mg.-1 Gm.-5 Gm.

**POLYOTIC INTRAVENOUS:** 100 mg.-2.5 Gm.

**POLYOTIC OBLETS®:** 4's-6 x 4's

**POLYOTIC CAPSULES:** 50 mg., 25's-100's;

100 mg., 100's; 250 mg., 16's-100's

**POLYOTIC TABLETS:** 50 mg., 25's-100's;

100 mg., 25's-100's; 250 mg., 16's-100's

**POLYOTIC MASTITIS OINTMENT** ¼ oz.

**POLYOTIC COMPOUND MASTITIS OINTMENT:** ¼ oz.

**POLYOTIC OPHTHALMIC OINTMENT 1%:** 6 x ½ oz.

**POLYOTIC POWDER 2%:** 35 Gm.

**POLYOTIC TOPICAL OINTMENT 3%:** 1 oz.

**POLYOTIC SOLUBLE (Tinted) POWDER:**

¼ lb.-½ lb.-1 lb.-5 lb.

**AVIANIZED® RABIES VACCINE: (Canine):**

1 dose-5 x 1 dose-10 doses-100 doses

**AVIANIZED RABIES VACCINE: (Cattle):** 10 doses

**AVIANIZED CANINE DISTEMPER VACCINE:**

1 dose-10 x 1 dose

**ANTI-CANINE DISTEMPER SERUM AND ANTI-INFECTIOUS**

**CANINE HEPATITIS SERUM:** 100 cc.

**INFECTIOUS CANINE HEPATITIS VACCINE:** 2 cc.-10 cc.

**BRUCELLA ABORTUS VACCINE:** 1 dose-5 x 1 dose-

5 doses (25 cc.)

**FELINE DISTEMPER VACCINE:** 1 immunization (2 vials

Vaccine, 2 vials Sterile Diluent, 2 cc.)

**ANTI-FELINE DISTEMPER SERUM:** 10 cc.

**CARICIDE® Diethylcarbamazine TABLETS:**

400 mg., 25's

**DIETHYLSTILBESTROL SOLUTION:** 10 cc.-50 cc.

**LEPTOSPIRA CANICOLA-ICTEROHEMORRHAGIAE BACTERIN**

Whole Culture Inactivated:

1 dose

*Other products to be added.*

**LEDERLE PROFESSIONAL**



# **The Practicing Veterinarian is the Key man in any Rabies Control Program**

1

**AVIANIZED® RABIES VACCINE Modified Live Virus**  
(Chick Embryo Origin)—Vacuum-Dried *Lederle*. For dogs only.

The control of rabies requires the vaccination of a minimum of 7 out of 10 dogs. In areas where practicing veterinarians have been able to achieve this goal using AVIANIZED Rabies Vaccine there has been a marked reduction in rabies incidence, human deaths and number of antirabic treatments.

2

**AVIANIZED® RABIES VACCINE Modified Live Virus**  
(Chick Embryo Origin)—Vacuum-Dried *Lederle*. For cattle only.

The problem of rabies in cattle is becoming increasingly important in the United States. The U.S.D.A. has reported 1,931 laboratory-confirmed cases for the years 1952 and 1953. The WHO Expert Committee on Rabies has reported high-egg-passage Lederle-Flury strain Rabies Vaccine for cattle to be antigenic and devoid of pathogenic properties. In field trials during the past 3 years, on over a thousand head, immunity has been demonstrated by challenge (68% survivors vs. 25% in controls).

**The practicing veterinarian is more liable to day-to-day  
rabies exposure than any other professional group.**

3

**RABIES VACCINE—Semple Vaccine *Lederle*.**

For use by physicians  
in antirabic (Pasteur) treatment of exposed persons.

4

**Antirabies Serum *Lederle*.**

For use by physicians in antirabic treatment  
of exposed persons as indicated. Now available, cost-free  
to exposed veterinarians through  
their local veterinary associations.



AVAILABLE TO VETERINARIANS ONLY

*Lederle* **LEDERLE LABORATORIES DIVISION** **AMERICAN CYANAMID COMPANY** PEARL RIVER, N. Y.

**NEW!**

an ointment specifically formulated for treating inflammatory skin conditions...with or without bacterial infection

## NEO POLYCIN-HC\*

anti-inflammatory • antipruritic • antibacterial

Provides hydrocortisone...to stop inflammation and itching

**plus**

neomycin

bacitracin

polymyxin B

} to prevent or control bacterial infection

stabilized in the unique FUZENE® base that rapidly releases more medication

### Two dosage forms

#### NEO POLYCIN-HC OINTMENT



Each gram contains:

Hydrocortisone acetate.....10 mg. (1%)  
Neomycin.....3 mg.  
Bacitracin.....400 units  
Polymyxin B.....8000 units  
5 Gm. tubes

\*Trademark

#### NEO POLYCIN-HC OPHTHALMIC OINTMENT

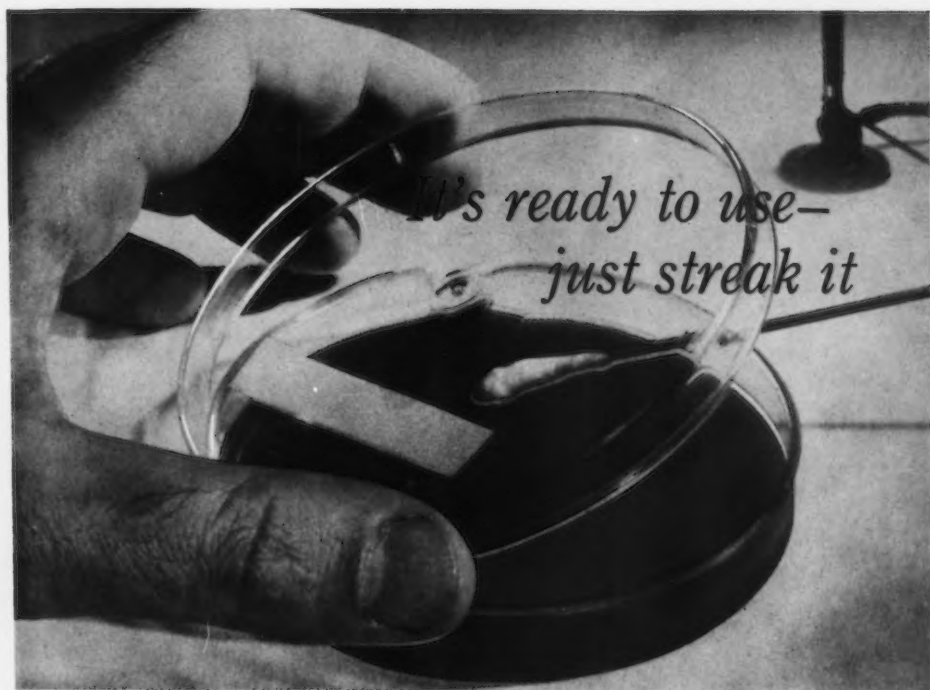


Each gram contains:

Hydrocortisone acetate.....10 mg. (1%)  
Neomycin.....3 mg.  
Bacitracin.....500 units  
Polymyxin B.....10,000 units  
in an anhydrous lanolin-petrolatum base  
½ oz. tubes with applicator tip

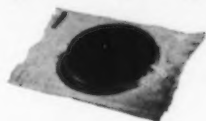
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# In the field...or in your clinic



## PRE-MED

(prepared medium)



*the disposable blood agar plate  
sealed in a sterile bag*

With PRE-MED, you are always ready to culture fresh specimens—no matter how many miles you may be from your laboratory. Even perishable specimens become routine to handle. With ready-to-use PRE-MED, you simply open the sterile outer bag and streak the plate. Read when incubation is complete—then destroy.

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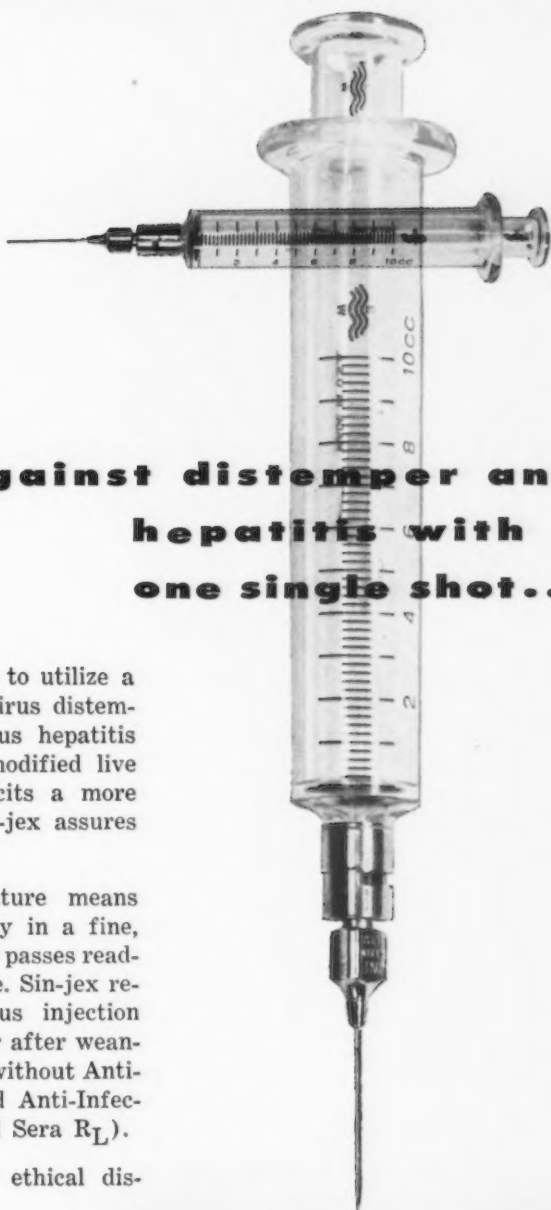
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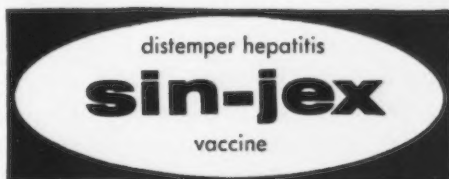
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